

# **JECA ABSTRACTS**

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## VOLUME 1 NO 1

### Post-natal Changes in the Morphology Of Sertoli Cells in the Scrotal and Abdominal Testes of Unilaterally Crypt-orchid Goats.

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#### ABSTRACT

Sertoli cells of scrotal and intra-abdominal testes from 25 unilaterally cryptorchid West African dwarf goats between the ages of 1-30 months were examined by light and electron microscopy. In the scrotal testes, the major developmental changes included differentiation of sertoli-to-sertoli cell junctional specializations, alteration of cell shape due to proliferation of the spermatogenic cells, development of nucleolar vesicles, convolution of nuclear profiles and the profusion of SER. In the intra-abdominal testes, the first alteration was noted in the Sertoli cells of 3-4 month-old goats, which contained dense masses shown ultrastructurally to be clumped SER with narrow cisternae. In 6-8-month-old animals, further changes included atrophy of Golgi complex, dilation of cisternae of RER, accumulation of lipid droplets and lipofuscin granules. Many of these organelles and inclusions were no longer obvious in the Sertoli cells of 12-15 month-old goats; rather intracellular vacuoles and dilated intercellular spaces had become common. In the 24-30 month-old goats, the Sertoli cells contained mostly microfilaments and basally located mitochondria with circular cristae in dense matrices. The alterations in the architecture of Sertoli cells in the intra-abdominal testes imply Sertoli cell dysfunction. This, in turn, would contribute largely to the failure of spermatogenesis that characterizes cryptorchidism.

**Key words:** Sertoli cell morphology. Unilateral cryptorchidism. Testis. Goats.

### Effect of Topical Application of Zinc Oxide on Early Phase of Wound Healing.

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#### ABSTRACT

30 Albino rats (Wistar strain) weighing between 160-240 gm were used for the study. The animals were grouped into three with one group serving as the control and the two groups treated with 3% and 5% zinc oxide solutions respectively. Paramedical incisions measuring about 2cm were made bilaterally under light ether anesthesia and subsequently sutured with plain catgut. Smear biopsies were taken from the wound edges at different time points and analyzed for connective tissue cell count. Results show a zinc oxide dose dependent fast response to injury with higher cell counts indicating a rapid inflammatory response, indicative of an effective wound healing process that may ultimately lead to a reduced total healing time and probably better quality scar tissue.

**Key words:** Zinc Oxide. Inflammation. Wound.

### The Effect of Pesticide Residues on the Small Intestinal Morphometry of Rats.

A.O. IBEGBU; S.P. SINGH; R.M. AMINU AND J.N.ALAWA.

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#### ABSTRACT

The study of the effect of pesticide residues on the small intestinal morphometry of rats was undertaken using thirty Albino (Wistar) rats, which were separated into three groups (A, B, and C). The first group (A) was the control group and was fed normal rat chow. The first test group (B) was fed with the experimental diet after seven weeks of storage with the pesticide while the second test group (C) was fed with the experimental diet after fourteen weeks of storage with the pesticide. The pesticide of choice for the study was the cooper storage grain powder mixed at the rate of 0.5kg per tone and the feeding period after the storage lasted fourteen weeks. The results revealed that small intestinal morphometry of animals in the test groups were affected when compared with the control. The mucosa and the villi were reduced in height. The surface amplification factor due to the jejunal villi was 7, 4 and 5 for group A, B, and C respectively of which the level of difference was significant between the control group (A) and the test groups (B and C) ( $p < 0.05$ ), and in-between the test groups (A and B) ( $p < 0.05$ ).

**Key words:** Pesticide Residues; Permethrin; Morphometry; Small Intestine;



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**Key words:** Sertoli cell morphology. Unilateral cryptorchidism. Testis. Goats.

### Effect of Topical Application of Zinc Oxide on Early Phase of Wound Healing.

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#### ABSTRACT

30 Albino rats (Wistar strain) weighing between 160-240 gm were used for the study. The animals were grouped into three with one group serving as the control and the two groups treated with 3% and 5% zinc oxide solutions respectively. Paramedical incisions measuring about 2cm were made bilaterally under light ether anesthesia and subsequently sutured with plain catgut. Smear biopsies were taken from the wound edges at different time points and analyzed for connective tissue cell count. Results show a zinc oxide dose dependent fast response to injury with higher cell counts indicating a rapid inflammatory response, indicative of an effective wound healing process that may ultimately lead to a reduced total healing time and probably better quality scar tissue.

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#### ABSTRACT

The study of the effect of pesticide residues on the small intestinal morphometry of rats was undertaken using thirty Albino (Wistar) rats, which were separated into three groups (A, B, and C). The first group (A) was the control group and was fed normal rat chow. The first test group (B) was fed with the experimental diet after seven weeks of storage with the pesticide while the second test group (C) was fed with the experimental diet after fourteen weeks of storage with the pesticide. The pesticide of choice for the study was the cooper storage grain powder mixed at the rate of 0.5kg per tone and the feeding period after the storage lasted fourteen weeks. The results revealed that small intestinal morphometry of animals in the test groups were affected when compared with the control. The mucosa and the villi were reduced in height. The surface amplification factor due to the jejunal villi was 7, 4 and 5 for group A, B, and C respectively of which the level of difference was significant between the control group (A) and the test groups (B and C) ( $p < 0.05$ ), and in-between the test groups (A and B) ( $p < 0.05$ ).

**Key words:** Pesticide Residues; Permethrin; Morphometry; Small Intestine;



## **Response of Decerebrate Piglets Dialysed with Muscimol to Hypercapnic Challenge.**

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### **ABSTRACT:**

The pathogenesis of sudden infant death syndrome (SIDS) is hitherto poorly understood. It is however, often associated with developmental abnormalities in the brainstem of victims. This study attempted to define the extent of compromise in central chemo sensation and response to hypercapnic challenge in piglets using an inhibitory neurotransmitter, GABA that is commonly found in the brainstem. The results showed a reduction in the ventilatory output indices of the animals. The results suggest a further mechanism by which central abnormalities might underlie reduced respiratory control as occurs in sudden infant syndrome.

**Key words:** sudden infant death syndrome, piglets.

## **Kidney Parameters And Age Structure Among Southeast Nigerians.**

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### **ABSTRACT**

Kidney parameters viz: length, breadth, thickness and volume were measured by trans-abdominal ultrasound among randomly selected 120 subjects from Southeast Nigeria. The subjects were both sexes aged between 15 and 70 years. Result showed that in all age group the length of the kidney is longer in the age range of 31-40 years, thereafter the kidney length began to decline. A positive correlation was established between age and kidney length up to the age of 40 years.

**Key words:** Kidney Size, Age Ultrasound.

## **Body Habitus and Abdominal Aortic Sizes Among Southeast Nigerians.**

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### **ABSTRACT**

Abdominal aortic diameters were determined at the level of coeliac axis, renal artery and bifurcation with the use of abdominal ultrasound. A total of one hundred and twenty-six (126) healthy Nigerians of both sexes were randomly selected for this study. The diameter figures for females were generally smaller, while the weight of the subjects shows a significant positive correlation up to the 86-95kg weight range. We however note no correlation between subject height and aortic diameters.

**Key words:** Body Habitus "Normal" Abdominal Aortic Diameter.

## **The Effect of Pesticide Residues on the Morphology of Liver of Rats.**

A.O. IBEGBU; S.P. SINGH; R.M. AMINU AND J.N. ALAWA.

Department of Human Anatomy, Faculty of Medicine, Ahmadu Bello University, Zaria-Nigeria.

### **ABSTRACT**

The study of the effect of pesticide residues on the liver of rats was undertaken using 30 Wistar, which were randomly separated into three groups, (A, B and C) of ten rats each. The first group (A) was the control group and was fed on normal rat chow. The second group (B) was fed on diet that was stored with pesticide for seven weeks while the third group (C) was fed on diet that was stored with pesticide for fourteen weeks. The experiment lasted for fourteen weeks. The result showed that the liver was affected in rats fed experimental diets. The liver of the test groups, showed various accumulations of degenerative fatty vacuoles and some areas of necrosis, which are more pronounced in group B than S group C animals. This shows that the liver was affected due to the pesticide residues present in test diet.

**Key words:** Pesticide Residues; Permethrin; Morphology, Liver.



## **Hiv: the Roundtable Virus.**

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### **ABSTRACT**

The paper concentrates information on the cell biology of the immunological crisis following the HIV infection and on key aspects of the complex molecular biology of propagation of the virus in the organisms, which explain why AIDS has no medical solution for now and in the foreseeable future. The enormity of the human tragedy is discussed in molecular terms all in effort to reiterate the importance of prevention programmes, education and counseling as the only effective methods of curbing the spread of the disease.

**Key Words:** HIV, Quasispecies, Retrovirus, Reverse Transcriptase, Integrase, AIDS.

## **Relationship of Measured Prostate Diameters With Age in Southeast Nigerians.**

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### **ABSTRACT**

Prostate sizes were obtained from a total of 113 subjects using ultrasound in a 12 months sampling period. Individuals with no apparent urinary disease symptoms and other debilitating diseases qualified for sampling. Result showed a direct relationship between the prostate size and ages of individuals sampled. The diameters, prostate length, transverse thickness and longitudinal thickness have statistically significant relationship with age ( $p < 0.01$ ). The standard deviation of the different age groups was found to vary markedly at age group 71-84 and 15-20.

**Key Words:** Prostate Size, Ultrasound, Benign Hyperplasia

## **Sex Dimorphism in the Adult Stature of A Nigerian Population**

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### **ABSTRACT**

The heights of 402 males and 268 females aged 20-28 years were measured. The absolute and relative sex difference were calculated and compared with data from various racial groups. The study showed that the relative sex dimorphism was lower than the values reported for Europeans and Asians but similar to those reported for sub-Saharan Africans. It also showed that the low sex dimorphism in adult stature was not primarily due to poor nutrition. Genetic factors appear to play an important role in the determination of sex dimorphism in stature. It will be inappropriate to use sex dimorphism in stature as a good index of the health status of a population.

**Key Words:** Stature. Sex Dimorphism.

## **The Immunohistological Changes Induced by Alloxan on the Pancreas of Albino Rats**

A.O. IBEGBU; S.P. SINGH, J.O. HAMBOLU, G.C. ONYEMELUKWE AND S.A.OJO

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### **ABSTRACT**

The study of immunohistological changes in the pancreas induced by the administration of diabetogenic dose of alloxan was undertaken using male Albino (Wistar) rats. The rats were randomly separated into four groups A, B, C and D of thirty rats in each group. The first group (A) was used as the primary control group, the second group (B), the third group (C) and the fourth group (D) were used as test groups. The test groups were administered with 200mg per kg body weight of alloxan, which is the diabetogenic dose. The second group (B) was used to study the direct effect of alloxan on the pancreas. The third group (C) was used to study the effect of diabetes mellitus on the pancreas while the fourth group (D) was used to study the possible effect of insulin therapy in the resuscitation of the pancreas. Examination of the pancreas revealed that they were affected in the test groups when compared to the control. The immunohistological features of the pancreatic islets were affected by alloxan administration, which showed selective toxicity for the islet beta cells as seen in the degeneration of these cells, while the other islet cells were unaffected. This showed that the administration of diabetogenic dose of alloxan has a selective degenerative effect on the Beta cells of the islets of Langerhans, leading to immunohistological changes in the pancreas.

**Key Words:** Immunohistology, Alloxan, Islet Cells, Pancreas, Albino Rats.



## **Ancient Embalming Methods Among the Nsukka Igbos of Southeastern Nigeria.**

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### **ABSTRACT**

A revive of ancient embalming practices and a survey of contemporary development in Nsukka Igbos and Idomas was carried out. The research was conducted using oral interviews to obtain data on 121 elders in 36 communities of the sampled area. Results showed that the Nsukka and Idoma people practiced embalming using hot oil, alcohol, low fire roasting and surgical methods. The extents were categorized. The reasons for embalming were also categorized and it was found that settlement of the affairs of the dead ranked highest among the reasons for embalming. Although variations exist, the present observation compare favourably, in some cases, with the findings of other workers on embalming procedures in ancient Egypt, Greeks, Babylonians, Sumerians and Romans.

**Key Words:** Ancient Embalming, Nsukka Igbos, Idoma People.

## **VOLUME: 1 NO 2**

### **The Medial Cutaneous Nerve of Fore arm and Its Descending and Recurrent Branches in Nigerians.**

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### **ABSTRACT**

A study of the patterns of distribution of the medial cutaneous nerve of the forearm was done on 100 Nigerian cadavers comprising of 80 males and 20 females. Two additional branches: descending and recurrent branches were seen in 50(62%), 11(55%) and 42(53%), 9(45%) respectively in 80 males and 20 females. Knowledge of such branches is useful in anaesthesia and human anatomy.

**Key Word:** Medial Cutaneous Nerve; Fore Arm; Descending Branch; Recurrent Branch;

### **Acute Toxic Effects of two Grades Of Diesel Fuel Oil on Rat Lungs**

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### **ABSTRACT**

A total of seventy (70) Albino Wister rats of both sexes with an average weight of 200g were used for the study. Single varying doses of two grades of diesel fuel oil were injected intra-peritoneally to determine (a) the LD<sub>50</sub>, and (b) the toxic pulmonary effects. Results show the LD<sub>50</sub> for pure diesel oil to be 37.18g/kg and that for adulterated diesel oil to be 36.98g/kg. Results show a dose dependent effect on the breathing pattern with breathlessness increasing in severity with increasing doses. Histopathologic examination of the lungs show a dose dependent thickening of the alveolar septa due to edema, inflammatory cell infiltrates. In those animals subjected to very high doses of diesel oil, there is evidence of pulmonary hemorrhage and disruption of the alveolar septa walls.

**Key Words:** Diesel, Rat Lungs, Breathing.

### **Age Related Changes in the Abdominal Aorta of Southeast Nigerians.**

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### **ABSTRACT**

A total of one hundred and twenty-six (126) apparently healthy Nigerians of both sexes from Southeast Nigeria were randomly selected and had their abdominal aortic diameters determined by ultrasonography. Abdominal aortic sizes were measured at the celiac axis, renal artery and bifurcation. The results show that aortic diameters of females were generally smaller and more so significant ( $p < 0.001$ ) at bifurcation.

**Key Words:** Age, Abdominal Aortic Size, Ultrasound.



## **The Histomorphological Studies of Viscera in Mice Foetal Alcohol Syndrome**

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### **ABSTRACT**

This work studied the effect of prenatal alcohol exposure on histomorphology of the heart, spleen and lungs of mice pups. Twenty-two 8-week old female inbred albino mice were divided into two groups of 11 each. Group 1 was given 10% ethanol (v/v) in water for two weeks, and then increased to 20% (v/v) for another three weeks. Group 2, which served as control received ordinary water throughout the period of the experiment. The animals in both groups were randomly mated overnight. On diagnosis of pregnancy, the ethanol was increased to 30% (v/v) for group 1 and maintained on this until birth when it was replaced with water. Both groups were fed commercial diet *ad libitum*. At the 4<sup>th</sup> day of age, the pups were sacrificed and the heart, spleen and lungs carefully dissected out, histosections prepared and stained with H & E. The histomorphological changes observed in the alcohol exposed pups included oedema of interalveolar septatae, oedema and fatty degeneration of myocardiac fibers. Their spleen was reactive and contained more lymphoblasts and lymphocytes while that of control contained more red blood cells.

**Key Words:** Alcoholism. Histomorphology. Mice Pups. Viscera

## **Comparative Study in the Growth Pattern of Prepubertal, Pubertal and Adult Visceral Organs of Male and Female Mice.**

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### **ABSTRACT**

This study investigated the growth of various organs in 72 male and female mice using increase in weight as the index of growth. The mice were randomly selected from the offspring of the same breeding stock. They were given food and drinking water *ad libitum* until they were sacrificed at 3, 6 and 12 weeks of age. At each age, 12 males and 12 females were sacrificed by severing the spinal cord at the atlanto-occipital joint. The live body weight of each mouse was determined. Following death, skeletal muscles (triceps, brachii and gastrocnemius muscles) and internal organs (lungs, heart, kidneys, liver and spleen) were dissected and their weights were determined. Humerus and femur were also dissected out from each mouse and their lengths were determined. The muscle mass index (milligram muscle weight per gram body weight) was determined for each muscle. The percentage of body weight contributed by each internal organ was calculated. The study demonstrated that although sex differences were not evident in the weights of these organs at 3 weeks of age, there were sex differences in the weights and growth patterns of muscles, bones and internal organs of male and female mice at 6 weeks and 12 weeks of age. It was suggested that these differences may have arisen from the possible significant influence of sex hormones on the growth and development of these organs in both male and female mice.

**Key Words:** Mice, Organs, Growth, Sex Differences

## **Anatomy: Where Molecular Biology Stands.**

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### **ABSTRACT**

The paper examines the subject matter and scope of molecular biology and the value of its concepts and techniques in advancing the frontiers of the life sciences in our time.

**Key Words:** Molecular Biology, Central Dogma of Biology, Tertiary Structure, Quaternary Structure.

## **Morphometric Studies of Testes in Fetal Alcohol Syndrome of Mice.**

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### **ABSTRACT**

An investigation was conducted to determine the effect of maternal alcohol consumption during pregnancy on the morphometry of testes of mice. Two groups of mice comprising of 12 females and 6 males were used. The offspring of group 1 served as control while those of group 2 were exposed to alcohol during gestation period. From 1-6 weeks of age, 10 male offspring were randomly selected from the two groups and sacrificed by severing the spinal cord at the atlanto-occipital joint. Following sacrifice, the testes were prepared for routine histological examination. Morphometric analysis showed reduced seminiferous tubular diameter in the testes exposed to alcohol during pregnancy when compared with the controls. The investigation has therefore demonstrated that maternal alcohol consumption during pregnancy affects the size of seminiferous tubules.

**Key Words:** Maternal Alcohol Consumption, Fetal Alcohol Syndrome Offspring, Testes, Morphometry.



## Physiological and Anthropometric Changes in the Offspring of Albino Rats Fed on Dietary Cholesterol in the Presence Of *Plasmodium Malariae*.

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### ABSTRACT

The present study has examined the physiological changes in young albino rats fed cholesterol supplemented diet in presence of plasmodia. *Plasmodium malariae* was established intrauterine in offspring of animal infected with the parasites and fed on 2% cholesterol supplement in diet. Mean serum cholesterol level obtained from control animals (Group A) was  $121 \pm 1.3$  (mg/100ml of blood). The mean serum cholesterol obtained from animals removed from cholesterol diet (Group B) on the day of litter was  $123 \pm 1.4$  (mg/100ml of blood). Mean serum cholesterol obtained from animals on cholesterol supplemented diet in the presence of plasmodium parasites (Group C) was  $519 \pm 1.5$  (mg/100ml of blood). Animals on cholesterol supplemented diet in the presence of parasites showed significantly higher ( $p < 0.0001$ ) level of serum cholesterol than the other two groups. The weight of animals in groups A and B was significantly higher ( $p < 0.0001$ ) than the weight of animals in-group C. The group B animals died six weeks after birth probably due to development of early atherosclerosis. Cholesterol diet evidently elevated serum level of cholesterol. Plasmodium parasites put down completely the fledging immunity of the animals. The study further highlighted the danger of elevated serum cholesterol level in the presence of malaria.

**Key Words:** Cholesterol, Atherosclerosis Intrauterine and Parasitemia.

## Morpho-edaphic Indices of *Heterobranchus Longifilis* (Valenciennes) in a Nigerian Basin.

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### ABSTRACT

Data on the morphometric indices and habitat preferences of *Heterobranchus longifilis* from Idodo River were obtained from monthly samples collected between April 1992 and September, 1993. In contrast with the observed ubiquitous distribution of other clariids by other workers, *H. longifilis* preferred the main river channel and grassy floodplain habitats. The morphometric measurements and meristic counts of 32 parameters are generated for the field identification of the species. Seasonal population structure showed a preponderance of females in the rainy season which coincided with the breeding season of the species.

## VOLUME 2 NO 1

### Femoral Intercondylar Notch Geometry of Nigerians

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### ABSTRACT

Ninety-four cadaveric femoral bones consisting of 60 males and 34 females type were collected and treated for preservation through standard procedures. Using the caliper method, the intercondylar notch width, Notch depth and diameter of distal end of femur were measured. The notch shape index and notch width index were also calculated. The mean notch depth was found to be  $3.30 \pm 0.14$  for the 94 femur bones. It was found to be  $3.23 \pm 0.14$  for male and  $3.37 \pm 0.20$  for females. The sex differences in notch depth were statistically insignificant ( $p > 0.05$ ). The diameter of the distal end of femur was  $7.98 \pm 0.60$  for male bones and  $7.85 \pm 0.55$  for female bones and the difference between male and female proved statistically significant ( $p < 0.05$ ). The Notch width as measured was  $2.31 \pm 0.21$  for males and  $2.21 \pm 0.24$  for females and sex difference in value proved insignificant ( $p > 0.05$ ).

The notch shape index (NSI) was calculated by dividing the notch width with notch depth. The Notch width index (NWI) was calculated by dividing the notch width with the diameter of the distal end of femur and the difference in value between male and female (NWI) proved statistically significant ( $p < 0.05$ ). The notch geometry had been implicated in anterior cruciate ligament (ACL) injuries and from this study we presume that the difference in incidence of ACL injuries between males and females is as a result of differences in intercondylar width index and the diameter of distal end femur in both sexes.

**Key Words:** Intercondylar Notch Width Index, Notch Shape Index, Notch Depth, Notch Geometry, Anterior Cruciate Ligament (ACL)



## Comparison of Some Features of the Small Intestine of Nigerian Local and Exotic (Isa Brown) Breeds of Chicken.

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### ABSTRACT

The Nigerian local and Isa Brown pullets were used to study the features of the small intestine. The length of the small intestine, the height and depth of the villi and crypts were determined respectively. In most of the age groups studied, the absolute mean lengths of the small intestine of the exotic (Isa brown) breed were significantly greater than that of the local breed ( $p < 0.05$ ). The height of the villi and the depth of the crypts of lieberkuhn were observed to be significantly greater in the Isa brown ( $p < 0.05$ ). While the villi were finger shaped in the Isa brown, they were observed to be leaf shaped in the Nigerian Local Breed. These findings tend to suggest that the small intestine of the Isa brown breed has a better-developed surface area modification for absorption. Information obtained may be of great value in selections involving Nigerian Chickens.

**Key Words:** Features, Small Intestine, Chicken.

## Cytological Determination of the Estrus Cycle in Guinea Pigs.

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### ABSTRACT

A cytologic study was carried out to determine the Estrus cycle in five female guinea pigs of reproductive age, for a period of 28 days in the Animal House of the College of Medicine, University of Nigeria, Enugu Campus, Enugu. Vaginal smears were collected from the animals and made on clean grease-free slides, fixed in 95% Ethanol and stained by Papanicolaou technique. The slides were microscopically examined and the 140 specimens graded accordingly. The morphological, cytological and clinical manifestations observed are presented in the results. The study suggests that the ovulation period in female guinea pigs lasts between 19-21 days, usually accompanied with an increase in body temperature within the range of 36.51-37.01°C.

**Key Words:** Guinea Pig, Estrus Cycle, Ovulation Period, Cytology

## Adiposity Patterns in Adolescents of Southeastern Nigeria Based on their Body Mass Index.

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### ABSTRACT

Anthropometrical data related to weight and heights were generated from 857 adolescents from Southeastern Nigeria. Using standard statistical packages, adiposity patterns were analyzed by delineation of the Body Mass Index (BMI= kg/m<sup>2</sup>) according to the method of WHO (1995). Result showed that 82.5% of the sample population had normal weight, 17.5% were overweight while 1.65% were obese. Generally, females showed a higher tendency to obesity than males. The implication of the result for the population under study was discussed.

## The Effect of Hexane Extract of *Azadirachta Indica* Leaves on Testicular Sperm Reserve in Mice

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### ABSTRACT

The 50% lethal dose (LD<sub>50</sub>) of hexane leaf extract of *A. indica* solubilized in 10% between 20 was determined as 182mg/kg body weight. 25 adult male albino mice (34.1-53) were randomly divided into five groups containing five mice each. The mice in groups I-IV were given graded doses of the extract @ 1, 7, 3, 3, 6, 7 and 8.33mg/kg body weight respectively by intraperitoneal route. They were treated 3 times a week for 4 consecutive weeks. Group V mice, which served as control received corresponding volumes of 10% between 20 solutions. The animals were weighed, sacrificed and the testes weighed. The left testis was macerated in 2mls of semen diluting fluid until a homogenous mixture was formed. Improved Neubauer's chamber was used to determine the testicular sperm reserve. The right testis, liver, kidney and spleen were routinely prepared for light microscopy. The control mice had significantly higher ( $p < 0.05$ ) testicular sperm reserve than the treatment group mice, which received the highest dose of the extract. Changes in the structure of testes and other viscera were not observed. These results suggest that intraperitoneal injection of the extract reduced testicular sperm reserve in mice in a dose dependent manner.

**Key Words:** Albino Mice, Hexane Extract, Neem Leaves, Sperm Reserve, Testes.



## Effects of *Rhaptopetalum Coriaceum* Oliv Stem Bark Extract on Serum Enzyme Activities and Histopathological Changes in Rats.

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### ABSTRACT

Daily oral administration of graded doses of ethanolic extract stem bark of *Rhaptopetalum coriaceum* Oliv administered to rats for three weeks produced a significant ( $p < 0.05$ ) increase in serum glutamate oxalo-transaminase (SGOT), pyruvate transaminase levels (SGPT) and a decrease in serum alkaline phosphatase (ALP). The extract was found to produce pathological lesions of the liver, kidney and lung. These lesions include: vascular congestion and hepatic necrosis in the liver, tubular necrosis in the kidney and pulmonary congestion with exaggerated alveolar epithelium in the lungs. These results suggests that users of this local remedy as hypotensive agent.

**Key Words:** Phaptopetalum Coriacum Oliv, Serum Enzymes, Pathology Rats.

## Acute Toxicity Determination of Pyrrolobenzothiazine and Pyrrolobenzoxazine Ring Systems on Mice

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### ABSTRACT

Toxicity tests were carried out on two benzothiazine and benzoxazine derivatives. For this experiment, a total of sixty (60) Albino mice with average weight range 18-26g were employed. For each test compound, thirty (30) mice were distributed in five cages and fed *ad libitum* for 14 days for acclimatization. The test compounds were suspended in a non-toxic solvent (Tween 80) and intraperitoneally administered into the mice at doses of 450mg/kg, 500mg/kg, 550mg/kg and 600mg/kg. The results showed that the compound pyrrolobenzothiazine ring system has a LD<sub>50</sub> value of 500.00mg/kg, while the compound pyrrolobenzoxazine ring system has an LD<sub>50</sub> value of 517.60mg/kg. These results are indicative of low toxicity values for the two compounds.

**Key Words:** Toxicity, LD<sub>50</sub>, Mice Benzothiazine, Benzoxazine

## Histochemical Study of the Effects Of Ethanol on Alkaline Phosphatase in the Female Femur of Wistar Rat Foetuses

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### ABSTRACT

The teratogenic effects of ethanol include the assaults of the various developmental processes of tissues exposed *in utero*, and particularly the mineralization bones. An experimental investigation of the mechanisms of action of this toxic agent was conducted in the femoral bones of the foetal Wistar rat by the histochemical assessment of the activity of alkaline phosphatase, an enzyme present within the osteoblasts and actively involved in the mineral deposition in bones during development. Enzyme was relatively sparse and less intense activity in the growing end of ethanol treated bone compared to the control. This appears to be a possible indication of the mechanism by which ethanol suppresses osteoblasts functions, hence, the ability to potentiate its toxic teratogenic effects.

**Key Words:** Ethanol; Alkaline Phosphatase; Wistar Rat Fetuses; Bone Mineralization.

## Postnatal Development of Bursa of Fabricius in the Nigerian Local And Isa Brown Chickens

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### ABSTRACT

Postnatal development of the Bursa of Fabricius was studied in Nigerian local and Isa brown chickens. The local chicken's attained maximum weight (.94g) at week 7 and week 13 for cockerels and pullet respectively while the Isa brown attained maximum weight (a.02g and 3.12g) at week 11 and 17 for cockerels and pullets respectively. Regression appeared earlier in local chickens before the Isa brown. These growth patterns may have effect on their resistance to some infections.

**Key Words:** Bursa Of Fabricius, Chickens.



## **Plastination-a Novel Method in Tissue Preservation**

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### **ABSTRACT**

The traditional method of teaching and research in Anatomy and Pathology use mainly specimens fixed in formalin and ethyl alcohol for the demonstration of gross tissue specimens. However, some of the limitations as regards preparation, storage, handling and disposal of these specimens have resulted in the introduction of this new method of tissue preservation called plastination which improves the handling, storage qualities and durability of these teaching and research specimens.

**Key Words:** Plastination, Polymerizable Resins, And Elastomers, Cured And Uncured Polymer, Intermedium, Impregnation.

## **Cadavaric and Anatomical Specimen Supply in Medical Schools of Southeastern Nigeria**

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### **ABSTRACT**

Sources of anatomical specimens were reviewed for the past three decades (1970-2000). Old technicians and technologists who had worked in the Departments of Anatomy in the medical schools in Southeastern Nigeria were interviewed. Classifications of different categories of the gross, embryology, and histology specimens, were done as well as their sources. Result show that Government Security Outfits were the sources of most of the cadavers used for dissection. Bones were recovered from dissected and spoilt cadavers. This information could be of help to new medical schools in Eastern Nigeria on how to source their anatomical specimen.

**Key Words:** Anatomical Specimens, Cadavers, Bones Eastern Nigeria.

## **VOLUME: 2 NO 2**

### **Age Related Variations in the Architecture of Caprine Haemal Nodes.**

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### **ABSTRACT**

Age related variations in the architecture of caprine haemal nodes were studied in West African dwarf goats aged between 1-24 months. Variations were observed in the thickness of the capsule, the content and organization of the cortical and medullary parenchyma as well as the stroma. In young goats aged between 1-4 months, the capsule was very thin (1-2um) and there was uniformly diffused lymphoid tissue in the cortical and medullary regions. The subcapsular and medullary blood sinuses were either absent or poorly developed in them. The older goats on the other hand, had thicker capsule reaching about 7um in 18-24 months old goats. Lymphoid nodules and blood sinuses were well developed. In the very old goats, features of involution were observed. Irrespective of age, haemal nodes in all animals showed evidence of myelopoiesis and lymphopoiesis. The study suggested that the architecture of haemal nodes so far described by earlier workers might have been influenced by the animal used for the study.

**Key Words:** Haemal Nodes, Age Variation, Goat

## **Effects of Crude Oil Contaminated Water on Haematocrit and Histopathology of Guinea Pig: Animal Model for Investigating Crude Oil Pollution.**

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### **ABSTRACT**

Twenty-four guinea pigs (*Caria porcellus*) obtained from the Animal House of College of Health Sciences, University of Port-Harcourt, Nigeria, were weighed individually and divided into six groups of four per group. They were allowed access to rat feed and tap water *ad libitum* for two weeks acclimatization. Different concentrations of crude oil (5%, 10%, 15%, 20%, 25%) were mixed with tap water and served to five experimental groups. The sixth group received 100% tap water and served as control. The study lasted for 28 days after which the following parameters were monitored in each guinea pig: appetite, body weight, packed cell volume (PCV) and the lung histopathology. Results showed loss of appetite, dull and disoriented conditions in animals with contaminated water. Microscopic examination of the lungs showed that effects of crude oil contaminated water increased with the concentration of crude oil. There was a progressive reduction in the value of Haematocrit in the experimental groups compared to the control groups. The results of the present study suggest that crude oil is toxic to the experimental animals.

**Key Words:** Crude Oil, Haematocrit, Histopathology, Guinea Pig



## The Significance of Adaptive Changes in Rat Haemoglobin Microenvironment and Electrophoretic Fractions During Barocamera Hypoxia

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### ABSTRACT

The haemoglobin heterogenous system and some aspects of the micro-environment of the respiratory protein were investigated in albino rats, trained to high altitude hypoxia in barocamera conditions. Hypoxia was simulated in a hypoxic cage at a "height" of 6000m above sea level. Electrophoretic analysis of haemoglobin, the oxyhaemoglobin dissociation curve and the activity of the 2, 3-diphosphoglycerate by pass were studied in the 1<sup>st</sup>, 3<sup>rd</sup>, 5<sup>th</sup> and 10<sup>th</sup> days of hypoxic exposure. While decrease in the concentration of fractions located towards the cathode was recorded, an additional 7<sup>th</sup> fraction appeared at the anode during the adaptation process. Decrease in the metabolic activity of 2, 3-diphosphoglycerate mutase with corresponding decrease in concentration of 2, 3-diphosphoglycerate (2, 3-DPG) which correlates with leftward shift of the oxyhaemoglobin dissociation curve was observed in the 3<sup>rd</sup> and 5<sup>th</sup> days of the experiment. A tendency towards normalisation of the haemoglobin P<sub>50</sub> concentrated of 2, 3-DPG and activity of 2, 3-DPG mutase was recorded in the 10<sup>th</sup> day of the exercise.

**Key Words:** Electrophoresis, Haemoglobin, Barocamera, Hypoxia.

## Hiv Seroprevalence and Confirmatory Rate in Enugu Urban Population: A Sentinel Survey

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### ABSTRACT

This sentinel study determined the occurrence of HIV infection and confirmation rate of seropositive individuals among diverse Enugu Urban population. A seroprevalence rate of 25.55 percent was obtained for September-December 1999 and a confirmatory rate of 10.57 percent ( $p < 0.05$ ) while seroprevalence rate for the period January-May 2000 was 19-29 percent and the confirmatory rate was 14.44 percent ( $p < 0.05$ ). For the nine months period, a seroprevalence of 21.77 percent and confirmatory rate 12.64 percent ( $p < 0.05$ ) were obtained. The overall picture of seroprevalence for this survey showed a rise and fall pattern. The decreasing rate of confirmation for HIV positive patients/subjects showed that many of them disappear into the wider population probably due to stigmatization. This together with the mere absence of HIV seronegative confirmatory rate posed a severe danger in the management of PLHA. It is concluded that both incidence and prevalence of HIV scourge will be difficult to predict while the risk of unconfirmed cases will enhance a wide and silent spread of the virus especially if they are negative seroconverts.

**Key Words:** HIV/AIDS, Seroprevalence, Confirmatory Rate; Seroconversion, People Living With HIV/AIDS (PLHA)

## Acute Toxicity Determination of two New Benzothiazino Phenoxazine Dyestuffs in Mice.

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### ABSTRACT

Two new heterocyclic benzothiazino phenoxazine dyestuffs have been subjected to acute toxicity test using mice as the test animal. For each dyestuff, a total of thirty albino mice with average weight range of 14-25g were used. The first dyestuff-Dibenzo[a,j][1,4]benzothiazino[3,2-c]phenoxazine had LD<sub>50</sub> value of 291.7mg/kg while the second dyestuff-8,-chloro-11-oxa-10-thia-5,9,18-triazadibenzo[a,r]pentaphene had LD<sub>50</sub> value of 363.07mg/kg. These values are within the limits of acceptable values for dyestuffs.

**Key Words:** Toxicity, LD<sub>50</sub>, Mice, Benzothiazino Phenoxazine

## Morphometric Study of the Nasal Parameters in Nigerian Igbo.

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### ABSTRACT

Morphometric measurements of the nasal parameters were carried out in 222 male and 120 female Nigerians with ages ranging from 10 to 34 years. The overall mean length was found to be  $6.21 \pm 0.77$ cm with males having a higher mean length of  $6.30 \pm 0.77$ cm while females had  $6.04 \pm 0.74$ cm. Similarly the width (W) and length (H) were higher in males ( $H = 1.99 \pm 0.65$ cm,  $W = 7.50 \pm 0.83$ cm) than in females ( $H = 1.92 \pm 0.34$ cm,  $W = 6.80 \pm 0.88$ cm). The ages of subjects in the male and female categories showed non-significant ranges ( $p > 0.05$ ) between males and females. Knowledge of these parameters is helpful in reconstructive surgery, rhinoplasty after trauma, infection with nasal loss and absence of nasal part in congenital malformation.

**Key words:** Nasal Parameters, Nigeria Igbo.



## Acute Toxicological Effects of Crude Oil on Haematological and Biochemical Parameters in Guinea Pigs.

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<sup>2</sup>Department Of Anatomy, University Of Port-Harcourt, Nigeria.

### ABSTRACT

The acute toxicological effects of Brass blend of crude oil on the haemoglobin concentration, and Liver functions in the Guinea Pig were studied. 25 Guinea pigs divided into five animals per group were used for the study. They were divided into 5 groups. One group served as a control group, while the others received varying doses of crude oil intra-peritoneally. After 24 hours of the administration, the following parameters were assayed; haemoglobin concentration, serum bilirubin levels, and serum Liver enzymes; aspartate transaminase, and alanine transaminase. Results show a dose dependent decrease in the haemoglobin concentration, while the bilirubin and enzyme levels in the blood increased in a dose dependent pattern, suggesting some degree of haematologic and hepatic pathology.

**Key words:** Crude oil, Biochemical Parameters, Guinea Pig.

## VOLUME: 3 NO 1

### Alcoholism and Bone Development: A Review

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### ABSTRACT

Alcoholic preparations is one of the ingredients present in beverages, drugs or chemicals in common use even at pregnancy; and this is well acclaimed to be toxic to the conceptuses, particularly, the developing skeletal tissues. A thorough literature search at MEDLINE and consultation with local scientific publications, and text books on alcohol and bone development was carried out to compile useful information and to up-date knowledge on this subject. It is of great interest to note that this subject had been, and is yet receiving much and global attention from experimental, social and health workers; particularly echoing the hazards of alcohol abuse on developing tissues. This subject had been an area of much consideration, and yet calls for more attention with the view to unveiling the mystery of the toxicity of alcohol, while in search of therapy for its assaults and convincing means of abstinence for the addicts.

**Key words:** Alcohol; Bone

### Influence of Thermoxidized and Fresh Palm Oil Diets on Some Mineral Contents of the Femur Bone of Growing Wistar Rats.

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### ABSTRACT

The effect thermoxidized and fresh palm oil diets on some mineral contents of the femur bone of growing Wistar rats was studied. Twenty-four rats were divided into three groups (A, B and C) of eight rats each, and fed on thermoxidized palm oil, fresh palm oil and normal (control) rats diets respectively for fourteen weeks. Each of the palm oil diets contained 15% (w/w) thermoxidized or fresh palm oil. The calcium concentration of the femur of the thermoxidized palm oil group (85.50 0.82ppm) was significantly ( $p < 0.01$ ) lower than that of the control (103.67 0.12ppm) and that of the fresh palm oil group (100.56 0.2ppm). The magnesium concentration of the femur of the thermoxidized palm oil group (15.81 1.11 ppm) was significantly ( $p < 0.01$ ) lower than that of the control (18.73 0.8ppm) and that of the fresh palm oil group (18.00 1.21 ppm). The copper concentration of the femur of the thermoxidized palm oil group (8.85 0.8 ppm) was significantly ( $p < 0.01$ ) lower than that of the control group (12.5 0.5 ppm) and that of the fresh palm oil group (11.6 0.65 ppm). Our results suggest that chronic consumption of thermoxidized palm oil diets may interfere with the normal mineralization process in bones of growing rats.

**Key words:** Fresh palm oil; Thermoxidized palm oil; Magnesium; Calcium; Copper; Bone.

### Prevalence Of *Pseudomonas* in Burn Wounds at the University Of Benin Teaching Hospital, Benin City, Nigeria.

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### ABSTRACT

The studies of the prevalence of *Pseudomonas aeruginosa* in burn wounds and the etiologic factors that contribute to burn contamination in the ward were carried out. Out of the 104 isolates from freshly admitted burn wounds patients; the isolates predominated in second-degree burns 45 (43.3%), followed by first-degree 38 (36.5%) and third-degree 21 (20.2%). From long term inmates the isolates dominated in third degree burns 33 (53.2%) and second-degree 29 (46.8%). The result of cultured samples taken from different parts of the ward showed that sink-traps 15 (53.6%) had the highest prevalence followed by bath-tubs 7 (25%), instrument 4 (14.3%) and air 2 (7.1%). While from staff nurses *Pseudomonas aeruginosa* predominated in the nostrils 18 (50%), mouths 11 (30.6%) and hands 7 (19.4%). The organisms were further tested for their antibiotic sensitivity pattern. The quinolones, cefuroxime and gentamicin were the most effective on isolates from newly admitted patients and to a lesser extend on isolates from



long-term inmate patients, environment and from staff nurses. Generally, there was a significant difference between ( $p < 0.05$ ) the antibiotic sensitivity pattern from freshly admitted patients and prolonged hospitalized patients and also between freshly admitted and the environment and staff nurses ( $p < 0.05$ ). No significant difference ( $p > 0.05$ ) between the environmental isolates and staff nurses isolates.

**Key words:** *Pseudomonas aeruginosa* in Burns, Environment and Sensitivity.

## **Nephrotoxicity of Chloroquine in the Rabbit.**

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### **ABSTRACT**

The histopathologic and biochemical changes produced by chloroquine phosphate in doses 5, 10, and 15 mg/kg over 30, 60 and 90 days in the albino ( $n = 22$ ) rabbits, with mean weight value of  $1.46 \pm 0.44$  kg and mean age value of  $9.0 \pm 0.25$  months, were investigated in the College of Medicine, University of Nigeria, Enugu Campus. Histopathology results showed that chloroquine induced lesions in the kidney. Peritubular and interstitial mononuclear cell infiltration, marked tubular dilation edema, necrosis and hyalinization as well as glomerular degeneration and loss in some instances were observed. The electrolytes were significantly ( $p < 0.05$ ) found retained except the bicarbonate ions, which were significantly ( $p < 0.05$ ) decreased at different periods of the study. Both findings reflect renal function impairment and lowering of GFR. Chloroquine should be taken with caution in view of its toxic potential.

**Key words:** kidney, Histology, Renal Function, Electrolytes, Ketoacidosis.

## **The Effect of Hydrocortisone on the Spleen of Albino Rats**

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### **ABSTRACT**

The study of the short-term effect of hydrocortisone on the spleen was conducted using thirty male Albino (Wistar) rat, which were separated at random into three groups (A, B and C). The first test group (A) was given 15 mg/kg body weight of hydrocortisone daily intramuscularly (IM), while the second test group (B) was given 7.5 mg/kg body weight of hydrocortisone daily intramuscularly. The third group (C) was used as the primary control group and as such was given normal saline through the same route. The administration of the drug lasted for 7 days. Histological examination of the spleen showed changes in the lymphoid tissue of the splenic nodules. These changes range from paleness of the lymphoid nodules to disappearance of some germinal centers of the spleen. These changes have been observed to be dose dependent and may be as a result of degeneration or mobilization of lymphocytes and monocytes from the lymphoid nodules of the spleen caused by hydrocortisone administration.

**Key words:** Hydrocortisone, Spleen, lymphocytes, germinal centers, lymphoid nodules.

## **Some Morphometric Changes Associated with Sick Cell Anaemia in Niger-Delta Region of Nigeria.**

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### **ABSTRACT**

Some of the long-term complications of sickle cell anaemia are growth retardation and morphometric changes that affect prediction anthropometry. This study on the morphometric changes (head, chest and mid-thigh circumference) was carried out on 40 patients confirmed homozygous for the disease who attend the sickle cell clinic at the University of Port Harcourt Teaching Hospital 160 normal growing children/adolescent drawn from the university's day care centre, nursery school, and the demonstration primary and secondary school, all aged between 2-18 years. The technique of measurement followed those described by Tanner et al, and using internationally accepted methods in anthropometry. The data obtained were then analyzed statistically. The results show that values for head circumference in the sickle cell anaemia patients were generally higher than those for the normal growing children/adolescents. This is probably attributable to the frontal bossing of the skull associated with the disease. Values for the chest circumference showed variations with age due to physiological and pathological changes associated with the disease. Mid-thigh circumference values are generally lower for sickle cell anaemia patient in this study.

**Keywords:** Morphometric changes, Sickle cell.



## Pancreotoxicity of Chloroquine in the Rabbit.

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### ABSTRACT

The Histologic and biochemical changes produced by chloroquine phosphate in doses 5, 10, and 15mg/kg over 30, 60, and 90 days in the albino (n = 10) and pigmented (n = 22) rabbits, with mean weight value of 1.46 ± 0.44kg and age mean value of 9 ± 0.25 months, were investigated in the college of medicine, University of Nigeria, Enugu Campus. Histopathology results showed chloroquine-induced lesions in the pancreas. Some pancreatic islet cells showed partial or total destruction. At days 90 the pancreas as well as increased capillarization at dose 15mg/kg in some instances. Biochemical analysis showed statistically significant (p < 0.05) increased mean values of tests over the control. This increase in sugar levels was dose and not time dependent at different periods of the study. This result has showed that the hyperglycaemia or diabetes mellitus was chloroquine induced suggesting that chloroquine is diabetogenic in experimentally induced rabbits. The histological findings in the present study were in agreement with biochemical observations. One should be wary of indiscriminate consumption of chloroquine.

**Key words:** Pancreas, islet cells, diabetes mellitus, fatty infiltration, arterial Attenuation.

## Liver and Kidney Morphologies Following Vitamin E Supplementation During Caffeinated and Non-caffeinated Paracetamol Administration in Rats

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### ABSTRACT

Liver and kidney morphology following vitamin E supplementation during caffeinated and non-caffeinated paracetamol was studied in rats for 2 weeks. The control group received distilled water orally. The treated groups designated A-D, received oral doses of 171.43mg/kg body weight of paracetamol, 171.43mg/kg body weight of panadol extra, 171.43mg/kg body weight of paracetamol and 4.286mg/kg body weight of vitamin E, 171.43mg/kg body weight of panadol extra and 4.286mg/kg body weight vitamin E respectively. Histological examination of the rat liver revealed that while sections of the liver from the groups on paracetamol and panadol extra + vitamin E showed signs of hepatic necrosis, vacuolations and sinusoidal dilation; liver sections of the group on panadol extra, paracetamol + vitamin E showed markedly improved cytoarchitecture of the hepatocyte with distinct cell outline and nuclei. Histological examination of the rat kidney revealed that while sections of the kidney from the groups on paracetamol and panadol extra showed slight loss of glomerular architecture, slight cell shrinkage, and less distinct nuclei; kidney sections of the groups on paracetamol + vitamin E and panadol extra + vitamin E showed markedly improved cytoarchitecture of kidney cells. Our results suggest that supplementation with vitamin E may be effective in remitting the hepatotoxicity and nephrotoxicity induced by paracetamol; and that however; co-administration of vitamin E with caffeinated paracetamol may potentiate the hepatotoxic effects of paracetamol.

**Key words:** Paracetamol; Caffeinated paracetamol; Vitamin E; Kidney; Liver; wistar rats.

## Effects Of Ethanol on the Gastro-duodenal Wall of Wistar Rat

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### ABSTRACT

Oral ingestion of alcoholic beverages is implicated in the multiple gastro intestinal disorders and complications in digestion, which commonly accompany alcohol consumption or abuse. Different concentrations of ethanol in the range of 10%, 20%, and 30% v/v which are experimental equivalents of alcoholic contents of lager beer, whisky and dry gin were orally given to 3 groups of adult Wistar rats A, B and C respectively for 30 days; and thereafter, histological examination of the gastro-duodenal wall was conducted. Excoriations of the wall in addition to gross emaciation and anorexia, severest in the group C rats were observed. Apart from the well-known effects such as emaciation and nausea, loss of nervous coordination, fluid and electrolyte balance were presently observed, indicative of a possible more serious clinical complications of alcohol abuse.

**Key words:** Ethanol; Clinical implications; Gastro-duodenal wall; Wistar rats.

## Establishment of Normal Prostate Sizes Within Age Groups in South East Nigerians

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### ABSTRACT

Prostate size viz: prostate length, longitudinal thickness, transverse thickness and volume were measured by trans-abdominal ultrasound among selected 113 subjects in South East of Nigeria. The subjects ranged from age 15 to 85. The result showed statistically significant relationship between age and prostate size (p < 0.01). It also established a normogram of the prostate sizes within the selected age groups.

**Key words:** Prostate size, age, ultrasound



## **Partial Androgen Insensitivity Syndrome: A Case Report.**

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**KEY WORDS:** AIS, Complete Androgen Insensitivity Syndrome (CAIS), Partial Androgen Insensitivity Syndrome (PAIS), Testicular feminization, Orchidectomy, Mammoplasty.

## **VOLUME: 3 NO 2**

### **Medical Curriculum and the Teaching of Anatomy in Nigeria: A Thought for the 21<sup>st</sup> Century.**

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#### **ABSTRACT**

The approach to the teaching of anatomy is changing in many institutions amidst the calls for the elimination of cadaver dissections as a teaching method. The usefulness of the traditional model of medical education also seems not to be adequate for the education of our 21<sup>st</sup> century medical scientists and practitioners as it produces more practitioners and less of groomed scientists. The level of social sophistication indicates a review of the curriculum so as to incorporate virtual reality into medical education and thus maintained the necessary "umbilical cord" between learning and practice. An integration of the traditional model which involves dissection and classroom teaching in a departmentally based manner and the systems based model which involves the teaching body realistic incorporation of virtual education seems to be the way out for the 21<sup>st</sup> century.

**Key words:** anatomy, medical Education, Curriculum, Traditional Model, Systems Based model, Virtual Education

### **Cephalic Index in A Young Adult Nigerian Population.**

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#### **ABSTRACT**

Population variations in cephalic index are due to interactions between genetic and environmental factors. Besides its use in classifying populations, the shape of the head is known to be distinctive in some diseases. A cross sectional study of 402 male and 268 female students of University of Nigeria Enugu Campus was done. Their ages ranged from 20 to 28. The mean values of head length in males and females were 19.5 0.7cm and 15.7 0.6 respectively. The values for the head breadth were 18.6 0.6cm and 15.4 0.5cm respectively. Males had significantly higher values of head length and breadth than females,  $p < 0.001$ . The mean cephalic index of males was 80.9 3.7% while that of females was 82.8 3.3%. The sex dimorphism was statistically significant,  $p < 0.01$ . Sixty per cent of males and 78% of females were brachycephalism. Only 3% of males and 1% of females were dolichocephalism. Our study has provided normal values of head length and breadth, and cephalic index for our population. It also suggests that there is a secular growth trend towards brachycephalization in our population.

**Key words:** Head length, Head breadth, Cephalic index

### **The Effects of Unripe Pawpaw Seeds (*carica Papaya*) Extract on the Histology of the Testis of Guinea Pigs**

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#### **ABSTRACT**

The anti-fertility effect of unripe pawpaw seeds (*carica papaya*) on the testes of adult male guinea pigs was studied. Oral doses of the unripe pawpaw seeds extract at 220mg/kg body weight and 44mg/kg body weight were administered orally for 7 days. Histological observation at low dose of 220mg/kg showed reduction in the interstitial and in the numbers of spermatozoa in the lumen of the tubule. At high dose of 440mg/kg body weight, there was degeneration of the basement membrane of the tubules, erosion of the interstitium and degeneration of tails of the spermatozoa in the lumen of the tubule. Our results suggest that unripe pawpaw seeds extract is cytotoxic to the testes of adult male guinea-pigs and may cause oligospermia in these animals.

**Key words:** Antifertility; Pawpaw seeds; Male guinea-pigs; Testis



## Acute Study of Histomorphological and Biochemical Changes Caused by Artesunate in Visceral Organs of the Rabbit.

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### ABSTRACT

15, 30 and 60mg/kg body weight doses of artesunate were orally administered to rabbits to determine the histologic and biochemical changes induced by the different doses of the drug for 30 days. The liver and kidney showed histological lesions of varied intensity. The alkaline phosphates levels of the test showed no statistically significant ( $p > 0.05$ ) increase over the control during the period of drug administration. But the aspartate and alanine transaminases showed significant ( $p > 0.05$ ) elevations at doses 60mg/kg, and 30 and 60mg/kg respectively. Cholesterol levels were significantly ( $p < 0.05$ ) decreased when compared with the control. Urea and creatinine levels were significantly elevated at doses 30 and 60mg/kg, and at all doses respectively. Sodium and potassium electrolytes showed statistically significant ( $p < 0.05$ ) increase at doses 30 and 60mg/kg, and at all doses of artesunate administration respectively. The histologic findings correlate well with biochemical observations. One should be wary of artesunate consumption in view of its toxic potential.

**Key words:** Enzymes, cholesterol, Urea, Creatinine, electrolytes, artesunate, histology.

## Effects of Ethanol on the Uterus of Gestating Wistar Rat

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### ABSTRACT

The uterus serves as protective and nutritive sac in which the conceptus develops. Any targeted assaults or intrusion to the conceptus would unlikely spare the uterus. Alcohol, a well-known toxic teratogenic agent is commonly taken as beverages, therapeutic or prophylaxis even during conception. Hence, the extent of damage to this organ with an experimental dosage of ethanol during conception in the rat was investigated in this report. 30% v/v ethanol was orally fed to an experimental group. Histological study of the uterus was done on day 15 to observe the extent of ethanol on the organ. The myometrium was characterized by necrosis and attenuation of the muscle fibres; while in the endometrium, apoptosis of the endometrial cells were observed, with the constriction, strangulation and laceration of the blood vessels and intra-uterine haemorrhage. In addition to the direct effects of teratogenic or toxic assaults on the conceptuses, the simultaneous effects of such agents on the uterus would inadvertently add to and aid the manifestations of any congenital anomalies observed.

**Key words:** Ethanol, Rats, Uterus

## Effect of Garcinia Kola on the Reproductive Organ Weight and Histology of the Testis and Anterior Pituitary Gland of Wistar Rats

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### ABSTRACT

The effect of Garcinia kola on the reproductive organ weight and histology of the testis and anterior pituitary gland of Wistar rats was investigated. Twenty male wistar rats weighing on the average 190g body weight, were used in this study and were divided into 4 groups (A, B, C, D) of 5 rats each. Group A rats were used as control and were fed normal rat chow only and water ad libitum. Group B rats were fed Garcinia kola diet (5% w/w). Group C rats were fed with Garcinia kola diet (10% w/w) while group D rats were fed Garcinia kola diet (15% w/w) and both groups had water ad libitum. A significant ( $p < 0.05$ ) fall in body weight and weight of testis was observed there where no significant change in weight of Epididymis, seminal vesicle, and Ventral prostate. Histological observation revealed that, group B rats, did not show any structural difference in both testis and anterior pituitary gland, when compared to group A. groups C and D rats however, revealed disruption of basement membrane of seminiferous tubule of testis, near absence of sperm in lumen of seminiferous tubule, increase in interstitial space and reduction in interstitial cells of Leydig. Congestion of cells of anterior pituitary gland was observed, these changes being marked in group D rats. The significance of this study therefore is that Garcinia kola has inhibitory effect on the reproductive activities of male Wistar rats.

**Key words:** Garcinia Kola, Testis, Pituitary gland, Rats.

## Effects of Non Selective Cyclooxygenase Inhibitors-Ibuprofen and Paracetamol On Glomerulogenesis in Sprague Dawley Rats.

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### ABSTRACT

The effect of non selective cyclooxygenase inhibitors Ibuprofen and paracetamol on glomerulogenesis in Sprague-dawley rats was studied. Fifteen female rats weighing between 165g-179g were randomly divided into three groups (A, B, and C) of five rats each. Group A animals received distilled water orally and served as control. The ibuprofen treated rats (group B) received doses of 3.5mg/kg/day while paracetamol treated rats (group C) received doses of 7.3mg/kg/day respectively by gavage. The animals were allowed feed and water liberally. Drug administration commenced from 10<sup>th</sup> day of gestation to 13<sup>th</sup> day after parturition. The neonatal rats were then sacrificed for tissue processing. Histopathology results showed ibuprofen induced derangement in the



neonatal kidneys. The manifestation include highly shrunken glomeruli, fibrosis, interstitial nephritis, hyaline droplets in the tubules, haemorrhage and infiltrated cells while paracetamol treated group showed lesser effects on the kidney architecture such as marked reduction in size of glomerulus (hypoplasia) and apparently wide capsular spaces some of which lacked glomeruli, shrunken glomeruli with haemorrhage, hyaline droplets and hyperchromatic cells. Both finding reflect renal function impairment.  
**Key words:** histology, non selective cyclooxygenase inhibitors, pregnancy, glomerulogenesis and renal function.

## **Comparative Study on the Effects of Urethane Anaesthesia and Pithing on Gastric Acid Secretion in Common African Toads (*bufo Regularis*)**

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### **ABSTRACT**

The pattern of gastric acid secretion under urethane anaesthesia and pithing in common African toads were investigated using the continuous method of recording acid secretion. Histamine was administered intramuscularly under Urethane induction and pithing to study their effects on gastric secretion. After an overnight fast, the animals were anaesthetized with urethane or pithing was induced depending on the study. The results showed that urethane provoked acid secretion while pithing inhibited it ( $p < 0.05$ ). Histamine produced an increase acid output under urethane but not in pithing ( $p > 0.05$ ). It is concluded that urethane increased acid secretion while pithing suppressed it and that both the vagal and histaminic pathways were involved in the acid secretory pattern observed for urethane anaesthesia and pithing in this study.

**Key words:** common African toads, gastric acid secretion (GAS), acid output, urethane anaesthesia, pithing.

## **Incidence of Congenital Malformation in the Maternity Section of Abia State University Teaching Hospital (Absuth) From 1984-1999**

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### **ABSTRACT**

The incidence of congenital malformation was studied in Abia State Teaching Hospital (ABSUTH). A total of 15,749 births were recorded in Abia State University Teaching Hospital between 1984 and 1999. One Hundred and three (103) of the newborn babies showed congenital abnormalities. Malformation associated with the nervous system were 17 (16.50%). Those associated with gastrointestinal tract were 36 (34.95%). Anomalies of the skin, cardiovascular system and urogenital system recorded were 2 (1.94%), 4 (3.88%) and 24 (23.30%) respectively. Skeletal system malformations accounted for 7 (6.77%) while oral and special senses recorded 13 (12.65%). These malformations may be attributed to a number of factors such as poor nutrition, age of the mother, genetic and environmental factors.

**Key words:** congenital malformation, New born, Abia State.

## **The Incidence of Low Birth-weight in three Specialist Medical Centres in Anambra and Enugu States.**

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### **ABSTRACT**

A retrospective review of birth weight in the three specialist medical centres in both Anambra and Enugu States were carried out to determine the incidence of low birth weight in babies.

Results from the three-year period of study showed that out of the total number of two thousand three hundred and eighty-five (2,385) weights studied; 7.5% had a low birth weight which is graded from weights less than 2.5kg. 6.3% of low birth weights occurred in males while 9.4% in females. Amongst single and multiple births, the incidence occurred in the ratio of 6.2% and 42.4% respectively. 6.4% of these babies passed through the vaginal birth while 17.7% were through cesarean sections.

**Key words:** Incidence, Birth Weight, Preterm

## **THE PATTERN OF PALMAR FLEXION CREASES AMONG THE IGBOS OF SOUTH-EASTERN NIGERIA.**

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### **ABSTRACT**

This study involves the inspection and documentation of the palmar creases of the right hand of 1000 subjects among the Igbos of the South-eastern Nigeria. The results showed that most of the subjects have 3 major creases, but about one-third of them have a midpalmar longitudinal crease which has not been given a prominent place in Caucasian studies. There was also a significant dimorphism in the pattern of creases between males and females.

**Key words:** Palmar crease, Sex dimorphism.



## Collodiaphysal Angle in South-Southern Nigerians.

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### ABSTRACT

The collodiaphysal angle is the angle between the axes of the femoral neck and its shaft. This angle was investigated in South-Southern Nigerians using 177 unilateral anterior posterior radiographs of the hip in subjects aged between 18 and 70 years with the standard technique of the Singh and Singh (1975). The angle ranged from  $100^{\circ}$  -  $155^{\circ}$  with a mean of  $137.330$  and standard deviation of  $7.57^{\circ}$  for males; and  $121^{\circ}$  -  $149^{\circ}$ , mean of  $135.43^{\circ}$  and standard deviation of  $7.05^{\circ}$  for females respectively with significant differences between males and females in both groups ( $p < 0.05$ ). This study documents for the first time the collodiaphysal angle of South-Southern Nigerians and further confirms that the angle is wider in males than females.

**Key words:** Collodiaphyseal angle, Nigerians.

## Histological Changes in the Pancreas of Wistar Rats Fed with Diets Containing Yaji (local Meat Sauce)

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### ABSTRACT

The meat delicacy called 'Suya' is native to the northern region of Nigeria but widely consumed across the country. It is served with its sauce called Yaji. His sauce is prepared by the physical mixture of spices that include clove, ginger, black pepper, and red pepper, as well as salt, magi cubes and groundnut powder. Records have shown that the individual active ingredients of substances have side effects when consumed in excess. This study seeks to determine the effect of Yaji (Suya sauce) on the histology of the pancreas in 20 rats. They were divided into 4 groups. Group D served as control while C, B and A received 10%, 20% and 30% of Yaji per kilogram of feed respectively at 71.3g of the feed per day for a period of 3 weeks. Comparison of the treated pancreas with those of the control animals indicated a pronounced histological alterations in the 30% and 20% treated animals. Necrosis of acinar cells occurred in group A with decrease in the number of beta cells. Enlarged acini were observed in B with distinct signs of capillary degenerations. In both A and B, the epithelial lining of the acini were discontinuous. C showed no distinct alteration except the stained colloids suggesting increase in secretion. C also showed distended duct. These histological alterations in A and B has shown that excessive consumption of Yaji can induce pancreatitis and diabetes mellitus.

**Key words:** Spices, Suya, Yaji, Diabetes Mellitus.

## Female Genital Mutilation: A Review

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### ABSTRACT

Female genital mutilation is a cultural practice that can adversely affect the health of a woman. It is not practiced solely in one area of the world. Of the estimated 85 to 114 million girls who have undergone genital mutilation, most live in Africa. Despite efforts to abolish it, it is still widely practiced in Nigeria. The national prevalence is between 50 and 60%. The timing of FGM varies from one part of the country to another. Also, the reasons for performing it differ amongst ethnic groups. The extent of female genital mutilation varies from simple excision of the clitoris and labia minora (types 1 and 2) as practiced in most part of Nigeria, to infibulation with excision of the clitoris, labia minora and majora (Type 3) as practiced in Sudan and Eritrea. Invariably, the procedure is performed by traditional healers, traditional birth attendants, trained midwives, and to a much lesser extent by doctors in some countries, notably Egypt, Sudan and Sierra Leone. In most cases, no anaesthesia is given and the procedure is done under very poor hygienic conditions. While the immediate complications of female circumcision include haemorrhage, infection and urinary retention, the long-term complications are labial adhesions, clitoral retention cysts, gynaesthesia, cryptomenorrhoea, vaginal fistulae, infertility, obstetric complications and HIV/AIDS. Emphasizing the reproductive health implications of this practice could prove an effective strategy towards eradication of female genital mutilation.

**Key words:** FGM, Female genital mutilation, Female circumcision, female genital cutting, FGC

## Histological Changes and Demonstration of Glycogen Distribution in the Gonads of Male Wistar Rats Following Long-term Ingestion of Mixed Palm Oil Diets.

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### ABSTRACT

Histological changes and of glycogen distribution in the gonads of male Wistar rats following long-term ingestion of mixed palm oil diets were investigated. Twenty-four young Wistar rats initially weighing between 60 and 80g were divided into 3 groups (A, B and C) of 8 rats each. Group A rats were fed with thermoxidized palm oil diet, obtained by mixing 15g of thermoxidized palm oil with 85g of rat chow (15% w/w). Group B rats were fed the fresh palm oil diet, obtained by mixing 15g of fresh palm oil with 85g of rat chow (15% w/w). Group C served as the control, and were given normal rat chow only. The animals were allowed feed and water ad libitum for 14 weeks. The weight of the testes of the group A animals ( $1.96 \pm 0.06$ ) was significantly ( $p < 0.01$ ) lower than those of group B and C ( $2.75 \pm 0.08$ ) and ( $2.98 \pm 0.06$ ) respectively. The difference between group B and C was not significant. There were some discoloration in the testes of the group A animals compared to the other two groups. Histological observations showed mild degeneration of some of the germinal epithelia and disruption of some of the interstitial cells compared to the control. The glycogen deposition was decreased in the group A and B animals compared to the control, with the effect being more pronounced in group A. These results suggest that chronic consumption of thermoxidized palm oil diets may have adverse effect on the testis Wistar rats.

**Key words:** testis; wistar rats; palm oil diets may have adverse effect on the testis of wistar rats.



## **The Incidence of Flatfoot Amongst Athletes in Port-harcourt**

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### **ABSTRACT**

The incidence of flat foot amongst 200 athletes in Portharcourt was determined using the contact 11 index development by qamara. The athletes were drawn from various sports clubs in Portharcourt town. The mean and standard deviation of contact index 11 were determined, and the degree of flat graded as either probable (mean  $\pm$  1SD TO 2SD) or definite (Mean  $\pm$  3SD or more). Incidence of definite unilateral flat foot was found to be 3% (males) and 4% (females). The incidence of bilateral flat foot was found to be 7% (Males) and 8% (females).

**Key words:**

## **Hepatic Rna/protein Ratio and Body Weight of Rats Subjected to Doses of Alcohol**

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### **ABSTRACT**

The effect of ethanol administration on rat liver sub-fractions (Whole Homogenate WH and post mitochondrial supernatant PMS), total protein content, liver RNA and RNA/protein ratio was studied. Administration of 20% ethanol as drinking water led to significant increase in rat liver weight: 19% for male rats and 43% for female rats, respectively. The mean total protein values, in the PMS were 420mg and 350mg respectively. These values were significantly higher than the control values of 420mg and 210 for male and female rats respectively, ( $p < 0.001$ ). The RNA result reflects no significant changes ( $p > 0.1$ ) compared to untreated rats, irrespectively of sex. The liver (PMS) RNA for male and female test groups were 0.010 and 0.011 respectively. These values are comparable with the control values of 0.010 and 0.012. the RNA/protein ratio obtained from ethanol pretreated rats showed a decreasing trend, which was significantly lower  $p < 0.01$  than the control water treated groups, irrespective of sex. The biochemical significance of these findings has been discussed.

**Key words:** Ethanol, liver whole homogenate, postmitochondrial supernatant, RNA/protein ratio, ingestion.

## **Prevalence and Types of Alopecia and Grey Hair Among South-Eastern Nigerians.**

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### **ABSTRACT**

The types and prevalence of alopecia and grey hair on the scalp among Southeast Nigerians was studied, using a population sample of two thousand (2000) subjects chosen within Enugu and Ebonyi State metropolis. The ages range from 40 years and above. Personal data or history of subjects was obtained through the administration of questionnaire and personal communication and observation of the scalp. Results showed that five hundred and thirty eight males (26.9%) of the total sample size had Type IV of common male pattern baldness, three hundred and fifty males (17.85%) had Type V of common male pattern baldness, and three hundred and three males (15.15%) had type VI of common male pattern baldness and eight hundred male (40%) had type VII of common male pattern baldness while two men (0.1%) had alopecia totalize. 27.15% had solitary grey hair (minimum of 5 grey hairs per head), 12.5% had the bunch type of grey hair, 52.15% had the generalized type of grey hair while 7.7% had little or no grey hair (less than 5 grey hairs per head). We therefore deduce from our statistical analysis that in males over 60 years of age there is an 80% incidence of male pattern baldness of types IV, V, VI and VII.

**Key words:** types, incidence, alopecia, grey hair.

## **VOLUME: 4 NO 1**

### **Normal Renal Dimensions in an Adult Nigerian Population**

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### **ABSTRACT**

A total of 310 subjects were randomly selected from southeast Nigerian adults with absence of any disease that could modify renal dimensions. Length, width and area of both kidneys were measured by Tran-abdominal ultrasound and correlated with gender, age, height, body weight, and body mass index (BMI). 135 (43.5%) of the subjects were males while 175 (56.5%) were females. Age ranged from 18 to 80 years old, height from 1.45 to 1.85m (1.67  $\pm$  0.08) for men and (1.60  $\pm$  0.08 for women), and body weight from



46 to 102kg (68.1 + 6.0 for men and 63.5 + 6.5 for women) and BMI from 17.3 to 40.1 kg/m<sup>2</sup> (24.4 + 2.4 for men and 24.08 + 2.8 for women). There was an association (one-way ANOVA test) between length, width and area for each kidney and for both, with height ( $p < 0.001$ ), body weight ( $p < 0.001$ ), BMI ( $p < 0.001$ ), and gender ( $p < 0.001$ ). renal lengths and area reduced with age ( $p < 0.001$ ). considerable reduction was noted from the 5<sup>th</sup> decade when compared to the other age ranges. Notably, kidney lengths decreased by about 0.3cm per decade from the 5<sup>th</sup> decade onwards. The left kidney was generally bigger than the right kidney ( $p < 0.01$ ). Results suggest that the normal pattern of renal length reported by other studies is inadequate for Nigerian black population.

**Key Words:** Kidney; Bimetry, Ultrasonography.

## **Effects of Monosodium Glutamate (MSG) on the Histological Features of the Spinal Cord of Adult Wistar Rat.**

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### **ABSTRACT**

An investigation was carried out the effects of monosodium glutamate (MSG), a commonly used food additive, on the spinal cord of adult Wistar rats. Twenty-four adult Wistar rats weight between 180-250g were divided into four groups of six rats per group. Graduated doses of 6mg, 12mg and 18mg per kilogram body weight were administered orally to three groups of animals labeled A, B and C. the fourth group served as control and received normal physiological saline. The spinal cord of the animals were dissected out and fixed in 10% formal saline. Spinal cord tissues were processed and stained by the Haematoxyline Eosine method. The results showed increased weight in the experimental animals, which is dose dependent. Histological examination of spinal cord tissues revealed a decreased haematoxyline uptake, which is suggestive of increased metabolic activities. This increase was also observed to be dose dependent. Evidence of cell damage and degeneration within the group also seem to be dependent.

**Key Words:** Monosodium Glutamate, Spinal Cord, Food Additive.

## **Effects of Bonny Light Crude Oil on the Histology of Cerebral Cortex in Fetuses of Wistar Rat**

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### **ABSTRACT**

The teratogenic effects associated with ingestion of crude oil on the histology of developing cerebral cortex was investigated in albino wistar rats. Single doses of 3ml/kg, 6ml/kg body and 9ml/kg body weight of crude oil was administered through gastric intubations to different groups of pregnant rats on the 7<sup>th</sup>, 8<sup>th</sup> and 9<sup>th</sup> day of gestation. Control rats received 6ml/kg body weight of normal saline on corresponding days. The fetuses were collected by hysterectomy on the 20<sup>th</sup> days of gestation. Histological layering reduced cell density and degeneration of neuroblasts in the intermediate and ventricular zones and the cortical plate. These effects were observed to dose dependent. The result indicate that crude oil ingestion can reduce malformations in the development of fetal cerebral cortex in the rat and therefore calls for greater awareness of the toxic effects of ingestion of crude oil.

**Key words:** Bonny Light Crude Oil, Cerebral Cortex

## **Anthropomorphic Patterns and Smoking in A Nigerian Population.**

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### **ABSTRACT**

Anthropomorphic measurements in terms of height, weight and body mass index determined in 5000-volunteered males and females. These include 2000 smokers (1500 males and 500 females) aged between 16 and 56 ( $\pm$  SD;  $38 \pm 16$ ) years, 1000 ex-smokers (700 males and 300 females) in the same age bracket; and 2000 non-smokers (1000 males and 1000 females) aged 16 to 56 (mean  $\pm$  SD;  $39 \pm 17$ ) years, the group who had never smoked which formed the control group. When compared to other groups, the males that smoked tobaccos were taller than all other groups; possibly because of the increased tallness, the male smokers also weighed much more than each of the other groups. It is possible that tobacco smoking increases the secretion of the male sex hormone testosterone, which promotes increased linear growth in males. On their other hand it may be possible that the gene which codes for tallness in men also encode male craving for tobacco. For tobacco smoking, which is implicated in many health hazards, male tallness may probably be the only health benefit.

**Key words:** Tobacco Smoking, Males, Females, Anthropomorphic Measurements.



## **An Accessory Flexor of the Thumb**

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Nigeria

### **ABSTRACT**

The presence of accessory muscles, nerves and other tissues/organs in the upper limb and other parts of the body of some individuals have been previously reported. We report the case of a cadaver with an accessory flexor muscle of the left thumb. This muscle is located on the volar aspect of the left forearm. It originates from the lower fibres of flexor digitorum superficialis (sublimis) and inserts into the tendon of flexor pollicis longus. It is supplied by the median nerve and produced flexion of the thumb at the interphalangeal joint. It therefore facilitated flexion of the thumb and the grasp mechanism of the individual. We have named it "*Flexor pollicis Accessorius*".

**Key words:** Muscle, Thumb, Flexor, Anatomic Variation.

## **Comparative Study of two Non-selective Cyclooxygenase Inhibitors Paracetamol and Ibuprofen on Maternal and Neonatal Growth**

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### **ABSTRACT**

The comparative study of the effects of two non-selective cyclooxygenase inhibitors ibuprofen and paracetamol on maternal and neonatal growth was conducted using 15 Sprague dawley rats, with mean body weight ranging between 165 and 179g. The rats were separated at random into three groups (A, B, and C). Identification of each animal was done by the number of strokes marked on their tail. The first test group (A) was given 7.3mg/kg day of paracetamol, while the second test group (B) was given 3.5mg/kg day of ibuprofen. The third group (C) was used as the primary control group and as such was given normal saline. Each rat was weighed at an interval of three days before and after pregnancy. Drug administration was done by gavage and commenced from the 10<sup>th</sup> day of gestation till the 13<sup>th</sup> day after parturition. On the 13<sup>th</sup> day after parturition the maternal weight, neonatal weights, tail lengths, crown rump lengths and the kidney weight was measured, in order to determine their effects on growth. The ibuprofen treated animals with a percentage weight loss (16.10%) and a mean weight difference (26.64g) were significantly affected ( $p < 0.001$ ) when compared to the control animals with a mean weight difference (3.66g) and a percentage weight loss (2.19%) while paracetamol with a maternal percentage weight loss (9.6%) and maternal mean weight difference (17.24g) were significantly affected ( $p < 0.05$ ) when compared to control animals. On the other hand only ibuprofen fed animals showed effects on the neonatal growth; with a mean neonatal weight (12.18g), mean tail length (2.11g), mean crown rump length (5.8cm), and mean weight of neonatal kidney (0.058g). all these parameters were statistically significant ( $p < 0.05$ ) when compared to control; with a mean neonatal weight (16.98g), mean tail length (4.02cm), mean crown rump length (7.3cm) and mean weight of neonatal kidney (0.17g). The paracetamol fed animals showed approximately the same values as stated above for the control animals. Our result shows that ibuprofen convey a greater effect than paracetamol on maternal and neonatal growth when used in pregnancy. This could be due to a compromised nutritional status of the maternal rat consequent on gastrointestinal, liver and kidney derangement by these drugs. Hence the abuse of these drugs in pregnancy should be avoided.

**Key Words:** Comparism, Cyclooxygenase Inhibitors, Gestation, Growth.

## **Hair Whorl Patterns on the Posterior Aspect of the Scalp Among Nigerians.**

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### **ABSTRACT**

The types and incidence of hair whorl pattern on the posterior aspect of the scalp amongst Nigerians was studied using a population sample with ages ranging between 15 and 40 years. The age range chosen was so because the scalp hair apparently deteriorates with aging as seen in senile alopecia. Five hundred subjects within and around Enugu metropolis, chosen randomly were studied. A photograph of the individual's scalp was taken from the rear (posterior) view. Observations for the location of the hair whorl were noted and studied. It was observed that Nigerians tend to have the centre of their hair whorl located mainly in the right superior-medial aspects of the scalp (44%) relative to the median plane and majority of the population (68.6%) had their hair whorls running in the clock-wise direction. We note that, hair whorls patterns of Nigerian deviate from the midpoint of the head with a mean value of  $18.37^\circ \pm 0.77^\circ$ . This is not too acute within the sample, when compared with the minimum value  $0^\circ$ .

**Key Words:** Types, Incidence, Distribution, Patterns, Hair Whorl, Scalp.



## **Traumatic Ruptured Diaphragm: A Clinical Diagnostic Dilemma**

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### **ABSTRACT**

Sequel to a car crash, Chief A, a 52-year old banker presented in the Orthopaedic Unit of University of Nigeria Teaching Hospital Enugu with fracture right forearm bones and minor bruises in the abdomen and buttocks. His fractured right forearm was treated surgically and patient was discharged. A month later, Chief A developed breathlessness and was therefore re-admitted in same hospital where radiological survey including plain chest radiography and tailored barium meal revealed a hitherto clinically occult rupture left hemi-diaphragm with mediastinal shift to the contra-lateral side. We present this case to highlight the pleomorphism of traumatic rupture of diaphragm with emphasis on the causes, clinical presentation, complications, models progression and different treatment options.

**Key Words:** Traumatic, Rupture, Diaphragm.

## **Osteochondritis Dissecans of the Knee Joint (Osgood-schlatters Disease)**

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### **ABSTRACT**

An 18-year-old male professional footballer presented in the surgical outpatient department (SOP) of University of Nigeria Teaching Hospital Enugu complaining of bilateral knee-joint pains and tenderness severe enough to prevent him from participating in training sessions and professional league matches. Both knee joint were X-rayed and the radiographs revealed bilateral Osteochondritis dissecans of the knee joints (Osgood schlatters disease). This case is being reported to highlight on the epidemiology, etiology clinical appearance, possibilities for radiological diagnoses, classification of osteochondritis dissecans, the various treatment modalities available complications of osteochondritis dissecans and above all emphasizes on the benignity of the disease.

**Key Words:** Osteochondritis Dissecans, Knee Joints, Osgood Schlatters Disease.

## **Digital Dermatoglyphics in Students of Delta State University, Nigeria.**

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### **ABSTRACT**

Dermatoglyphic studies have established that palmer and digital ridges form well defined patterns exhibiting traits that are genetically determined, appear to be conservative in their evolution and are therefore very reliable for establishing and confirming the historical relationship and within populations. Unilateral thumbprints of 248 students were recorded, studied and classified using standard methods. The results obtained showed that loops were the most predominant pattern type in both sexes followed by whorls and arches. However, no significant differences occurred between sexes in the pattern types ( $p > 0.05$ ). This study documents for the first time fingerprint patterns in undergraduates of Delta state university and further confirms findings in other parts of Africa.

## **Age and Sex Related Variations in the Maxillary Sinuses of South East Nigerians**

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### **ABSTRACT**

Craniofacial growth is believed to be a multifactorial process involving both genetic and epigenetic factors and how epigenetic functional matrices stimulate the transduction of regulatory signals. This study tested the relationship between the variation in maxillary sinus dimensions with sex and age. Lateral and anteroposterior radiographs of 74 males and 46 female of South Eastern Nigerians taken from 18<sup>th</sup> August 2003 to 12<sup>th</sup> July 2004 with ages ranging from 9 to 75 years were measured. The length, width and height of the sinus were measured using defined anatomical landmarks and analyzed. Data were analyzed using excel package of a tabletop computer, employing chi square test ( $X^2$ ) to determine the association between sinus dimensions and age or sex. The evidence to associate maxillary sinus dimensions with age and sex was of maxillary sinus giving the age or sex of individual is statistically unreliable.

**Key Words:** Age, Sex, Maxillary Sinus, Pneumatization.



## **Road Traffic Accidents in Uyo Urban, Akwa Ibom State: The Scourge of Motor Cycle Trauma**

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### **ABSTRACT**

A retrospective study of one thousand, two hundred accident victims managed in the State's apex hospital, the University of Uyo Teaching Hospital in the year 2002 is presented. The aim was to determine the scope of Road Traffic accidents in Uyo Urban, the hub of Akwa Ibom State commercial life, the role of motor cycles in the mishaps, the nature of trauma sustained; the bones commonly involved and the possible causes of the accidents: the data obtained, showed that motor cycles are involved in over 50% of the Road Traffic Accidents and account for about 73% of the total mortality 69 out of 1200 victims died (5.75%). Fractures of the Tibia and Fibula were the most common fractures sustained. Of a total of 782 fractures recorded, tibia accounted for 325 (41.5%) fibula 153 (19.6%) femur 99 (12.6%) skull 80 (10.2%) while radius and ulna bones accounted for 20 each (2.5%). Significantly relevant to these accidents were the alarming number of motor cycles on the roads, the personality and comportment of the individual riders, the time or period of occurrence of the accidents.

**Key words:** road traffic accidents, motor cycles, trauma.

## **Anthropometrical Profiles of the Frontal Sinus in Population of Southeast Nigerians**

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### **ABSTRACT**

The anthropometrical profiles, function and variation of frontal sinus have been poorly understood. Understanding these are important in sinus operation and palaeontology, to understand the puzzle of the meaning of the supra orbital development. In the present study radiographs of 74 males and 46 females of south east Nigerians were measured from 18<sup>th</sup> August 2003 to 12<sup>th</sup> July 2004. The subject age range from 9 to 75 years. The mean length, width and height of frontal sinuses were 35.36mm, 63.87mm and 12.93mm for males and 28.70mm, 60.73mm and 10.35mm for females respectively. Thus values for the dimensions of the frontal sinus were higher for males than females. The study revealed that most of the female frontal sinus width values fall above the mean in the distribution while most values for anthropometrical profiles of both sexes fall below the mean. This study is important to otorhinolaryngologist in the evaluation of the sinuses.

**Key Words:** Anthropometrical Profile, Frontal Sinus, Palaeontology

## **Profound Haematological Changes in Rats Fed on Different Diet Formulae: A Clue to the Basis of Ethnic Leuko-neutropenia**

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### **ABSTRACT**

Persons of African origin reportedly have benign Leuko-neutropenia. This relative role of vitamin B complex and protein on the leucocyte counts and distribution in an animal model was investigated inbred adult male and female albino rats weighing between 100-160g (n = 50) were randomized into four groups. At the end of six weeks feeding period, blood samples were obtained and total leukocyte count was done. The results of total count show that animals fed in protein supplemented diet had a profound increase in their leukocyte count when compared with the control. The study shows that specific dietary elements can induce profound changes in total and differential leukocyte count.

## **Effects of Chloroquine on Some Visceral Organs In The Rabbit: Histopathological Perspective.**

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### **ABSTRACT**

The histopathological changes caused by chloroquine phosphate in doses 5, 10, and 15mg/kg over 30, 60 and 90 days in the albino (n = 10) and pigmented (n = 22) rabbits, with mean weight value of 1.40 ± 0.44kg and mean age value of 9.0 ± 0.25 months were investigated in the College of Medicine, University of Nigeria, Enugu Campus. Histopathology results revealed linear, granular, lumpy and bumpy stainable iron deposition on the wall of the myocardium. The lymphoid organs showed prominent necrosis, fibrosis and disappearance of lymphocytes. Histology of the rabbits' duodenum also revealed marked mucosal ulceration and loss of villi in all treated groups. Patients of malaria are advised to consult their physicians for drug prescription and proper guidance in chloroquine consumption to avert the toxic consequences of frequent and indiscriminate chloroquine ingestion.

**Key Words:** Heart, Duodenum, Lymphoid Organ, Ulceration, Necrosis, Histology.



## Status of Breast Self Examination Among Health Professional of Abia State University Teaching Hospital

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### ABSTRACT

Breast self-examination (BSE) is recommended for breast cancer screening but most Nigerian women do not perform BSE regularly. Breast cancer, a significant cause of mortality, can often be tackled effectively if detected in an early stage. This may be achieved by mammography, physical examination by skilled practitioners or through breast self-examination. In this preliminary study, we present the responses received on breast self-examination among health professionals at the Abia State University Teaching Hospital, Abia State. One hundred questionnaires were distributed to final year female medical students, house officers (interns), pharmacists and nurses. Out of the 100 distributed, respondents were 94 (94%). Among the 94 it was found out that 79 (84) practice Breast self-examination, but the number that examine their breast monthly was only 45 (47.9%). With this low level of monthly breast self-examination, there is the need to create the awareness and encourage the regular monthly practice. Among the respondents 74 (78.7%) knew the gravity of breast cancer.

**Key Words:** Breast Self Examination, Cancer.

## VOLUME: 4 NO 2 ABSTRACTS

### THE CARDIAC SEPTOMARGINAL TRABECULA IN MAN AND SOME MAMMALS HESHMAT S.W. HAROUN AND \*MOHAMED A. AL-MOTABAGANI

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### ABSTRACT

The present work was designed to describe, in detail, the anatomy, morphometry and minute structure of the septomarginal trabecula of the right ventricle in man and some animals like camel, sheep and monkey. The results of this study would help to highlight the function(s) of such a band in these species. Furthermore, the full description of this trabecula in such animals might hopefully be of some value not only for academic comparative researches but also for the expectancy of utilization of any of them, in the future, in human cardiac reconstructive surgeries. Forty adult hearts, of both sexes, (10 for each species) were used in this investigation for the comparative morphological, morphometric and light microscopic study of the septomarginal trabecula (moderator band) in man, Arabian camel, sheep and monkey. This work was carried out in the Anatomy and Histology Laboratories, College of Medicine, KFU, Dammam, KSA. The trabecula was grossly examined and morphometrically assessed. Histological sections of the trabecula were differently stained and examined by the light microscope.

The trabecula was observed to extend from the interventricular septum to the base of the anterior papillary muscle in man (or the muscle papillaris magnus in animals). In each of the four species investigated, the trabecula carried the specialized myocytes of the conducting right bundle branch that appeared as a longitudinal fibrocellular tract amongst ordinary myocardial fibres. The cells of this tract were faintly stained, foamy, arranged edge to edge in clusters, displaying a mosaic-like appearance, and increasing in size as traced distally. The minute structure of the trabecula was observed to be the most developed in sheep and the least in monkey. A tortuous small-sized artery was detected within the trabecula. No morphological or structural sex-differences of the trabecula existed in any of the species investigated some significant morphometric species-differences were detected.

**Key Words:** Septomarginal Trabecula (Moderator Band Anatomy, Histology, Morphometry, Human, Camel, Sheep, Monkey.

### Anthropometrics of Normal Newborn Infants in Uromi, Edo State

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### ABSTRACT

This study aims to establish anthropologic norms among normal newborn in Uromi, Esanland. Nigeria. Measurements of weight in kilograms, length (cm), occipitofrontal and suboccipitobregmatic head circumferences (cm) of 180 newborn infants comprising 100 males and 80 females of normal birth weight were made 15-30 minutes after birth. Weight was measured using beam scale, while the others were measured using a tape rule. These measurements were carried out at Saint Camillus Hospital Uromi. The mean birth weight for males is 3.099kg  $\pm$  0.350 while that of females is 3.061kg  $\pm$  0.333. The mean occipitofrontal head circumference for males is 33.40cm  $\pm$  2.093 while that of is 33.462cm  $\pm$  2.321. The mean suboccipitobregmatic head circumference for males is 30.82cm  $\pm$  1.955 and for females 30.475cm  $\pm$  1.841. The mean length for males is 47.49cm  $\pm$  3.904 and for females 46.775cm  $\pm$  3.645. The bmi (kg/square metre) for males is 13.969  $\pm$  2.583 and for females 14.166  $\pm$  2.302. The ratio of occipitofrontal head circumference to length for males is 0.708  $\pm$  0.075 and for females 0.718  $\pm$  0.062. The ratio of suboccipitobregmatic to occipitofrontal head circumference for males is 0.923  $\pm$  0.034 and for females 0.912  $\pm$  0.049.

The mean birth weights is lower than the value for USA (3.4kg) but higher than the value obtained in India (2.9kg  $\pm$  0.2), it is higher than the obtained in other parts of Nigeria. The mean lengths are lower than the values obtained in USA (45-55cm), and India (50-52cm). the mean occipitofrontal head circumference was found to be lower than the in India and USA (35cm) but agrees with values obtained elsewhere in Nigeria. This work apart from documenting for the first time the BMI and ratios of head circumferences and lengths of infants in Nigeria hopes to enrich the existing information globally.

**Key Words:** Newborn Infant, Occipitofrontal, Suboccipitobregmatic, BMI.



## Width to Length Ratio of Dry Adult Indigenous Nigerian Mandibles.

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### ABSTRACT

This study was carried out to provide a data on the width, length and width to length ratio of Nigerian mandibles, which could be useful for anthropological and clinical purposes. It was a cross sectional anatomical study. Thirty dry adult Nigerian mandibles selected from bone collection of Anatomy Departments of some Nigerian universities were used. The length and width of the mandible were measured across the mental foramen using digital vernier caliper and the width to length ratio caliper and the width to length ratio calculated. The following were observed: the mean length for the right and left sides of the mandibles studied were 9.74cm and 9.99cm respectively. The mean width for the right and left sides were 3.02cm and 2.97cm respectively while the width to length ratio for the right and left sides were 0.310 and 0.297 respectively. The difference observed between the right and left sides was not statistically significant ( $p > 0.001$ ). The width on the right and left sides of Nigerian mandibles were approximately 13% respectively of the length of the mandible. These values are similar to some African populations but differ from other groups, most especially the Caucasians. The result of this study is reliable in anthropological study and clinical practice (Dentistry).

**Key Words:** Width, Length, Mandibles, Nigerians.

## Sonographic Measurement of Absolute and Relative Renal Lengths in South East Nigerian Adults

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### ABSTRACT

The objective of this study was to evaluate sonographically measured absolute and relative lengths of normal kidneys according to subject height, sex and age. Real time sonography was performed on 310 subjects (135 men and 175 women) without renal impairment. Measurements of longitudinal renal diameter represented absolute renal length (ARL). Relative renal length was calculated using the kidney length: body height ratio (KBR). The subjects' ages ranged from 18 to 80 years (mean =  $38 \pm 10.6$ ). The mean height of the subjects were  $167 \pm 8$ cm for men and  $160 \pm 8$ cm for women. The left kidney was absolute and relatively longer than the right kidney, regardless of sex ( $p < 0.001$ ). The mean ARL was significantly greater in men than in women for both kidneys ( $p < 0.05$ ), but there was no significant difference between the mean KBRs ( $p > 0.05$ ). Renal length decreased with age, peaked at the 4<sup>th</sup> decade of life and the rate of decrease seemed to accelerate after 50 years of age. Sex was not a significant predictor of length when height and age were included in the multivariate regression analysis. Results suggest that relative renal length better represents kidney size than absolute renal length because it eliminates sex and height differences.

**Key Words:** Absolute Renal Length; Relative Renal Length; Biometry; Ultrasonography.

## Anatomical Variations in Ileo Sigmoid Knot: Our Experience at Iyi-Ewu Hospital (A Suburban Hospital Near Onitsha, Anambra State) Nigeria-case Report.

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### ABSTRACT

Five patients presented or referred with acute intestinal obstruction caused by Ileo-sigmoid knot at Iyi-Ewu Hospital Ogidi, suburban hospital near Onitsha, Anambra State, Nigeria between October 1997 to June 2002 are described. All were blacks of Ibo tribe of South East Nigeria in the West African sub-region, indicating that this condition can also be seen in blacks of West Africa as well. Existence of the disease had been reported extensively in blacks of Southern and East Africa, in many series; (Kallio 1932, Faltin 1938, Burkit 1960 and Hall-Craggs 1960). The incidence of the disease may be the same in all three regions (West, East, and Southern Africa). Owing to its complex nature correct pre-operative diagnosis was only made in one patient who had a typical radiological appearance of Ileo-sigmoid knotting (Compound Volvulus). Three of the patients were referred to us, one after gridiron incisional exposure for appendectomy, and one after lower midline vertical laparotomy exposure for supposed small bowel obstruction from adhesion, the third after upper midline vertical laparotomy exposure for supposed perforated duodenal ulcer with peritonitis. On the fifth patient correct pre-operative diagnosis was not made before operation. The possible aetiologies, anatomical variations and operative techniques are discussed; as well as the inherent problems in further management of the referred patients by doctors inexperienced in dealing with complex surgical entity *ab initio*.

**Key Words:** Ileco-Sigmoid Knot, Intestinal Obstruction, Laparotomy And Hyperactive Bowel.



## Antropometrics, Awareness, Prevalence and Pattern of Obesity in Nigerian Type 2 Diabetic Patients.

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### ABSTRACT

The University of Nigeria Teaching Hospital (UNTH) Enugu was used for the study. One hundred and thirty six Type 2 diabetic patient who attended the Diabetes clinic for the first time between Jan 1997 and Jan 1999 as well as 100 controls were assessed. Patient and controls had their BMI, waist circumference and Waist/hip ratio (WHR) measured. They also responded to a questionnaire on awareness of obesity. The diabetic patients were made up of 60 females and 76 males while the controls were 50 males and 50 females. Prevalence of obesity among the diabetics was 11% (13/136). 76/136 (55%) of diabetic patients were overweight. Abdominal obesity was present in 30/136 (22.8%) of diabetics. Forty nine out of 89 obese or overweight diabetics (55%) did not consider themselves overweight. Thirty five out of 57 obese or overweight controls (61%) did not consider themselves overweight. Only 50% of both diabetics and controls knew that obesity was a health hazards. There was no statistically difference between the diabetics and control with regards to awareness of the health hazards of obesity ( $p > 0.05$ ). The prevalence of obesity was 11% and central obesity 22.8% in the cohort of diabetic patients studied. Central obesity was commoner among the diabetic females. It was present in % of female diabetics and % of male diabetics. The majority of overweight and obese diabetic patients and controls did not consider they overweight. Only 50% of the study population was aware of the health hazards of obesity. These findings have far reaching implications for primary and secondary prevention of type 2 diabetes mellitus and other health conditions for which obesity is a risk factor.

**Key Words:** Diabetes, Obesity, Awareness, Prevalence

## The Relevance of Simple Anthropometric Parameter of Body Mass Index (BMI) in Assessing Nutritional Status of Surgical Patients

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### ABSTRACT

The study has showed that malnutrition is known to increase morbidity and mortality in surgical patients. Another study reported the superiority of the anthropometric measurement of Body Mass Index (BMI) over other methods used in assessing nutritional status. The aim of this study is to highlight the significance of the use of simple anthropometric parameter of Body Mass Index (BMI) in the assessment of nutritional status of surgical patients relating such to nature of surgical procedures in terms of invasiveness and duration of hospital stay. Patients presenting for minor, intermediate and major surgeries ( $n = 60$ ) at Parklane Specialist Hospital, Enugu were selected for the study; after informed consent obtained. The age range of study population varied from 10 to 80 years and the M: F ratio given as 1:2:4. The weight and height of individual patients were measured at admission and body mass index ( $\text{kg/m}^2$ ) computed. Baseline investigations including haemogram, leucocyte count and urinalysis were done. The pre-operative course and post-operative outcome were monitored till discharge. At discharge, patients were re-assessed and findings documented. Data obtained was statistically analyzed. Pre-operatively, 29.4% of patients were malnourished ( $\text{BMI} < 20\text{kg/m}^2$ ) and increased significantly to 41.8% post-operatively at discharge. On admission, 58.83% were well nourished ( $\text{BMI} = 20\text{--}25\text{kg/m}^2$ ) while at discharge this declined to 47.1%. About 11.76% presented pre-operatively as overweight ( $\text{BMI} = 25\text{--}30\text{kg/m}^2$ ). None of the patient was found to be morbidly obese ( $\text{BMI} > 40\text{kg/m}^2$ ). 52.9% underwent intermediate surgery while 35.3% and 11.8% presented for minor and major surgeries respectively. The mean BMI of patients presenting for minor surgery is given as  $23.2\text{kg/m}^2$  declining only slightly to  $23.12\text{kg/m}^2$  post-operatively. Mean BMI of  $20.85\text{kg/m}^2$  at discharge. In patients undergoing major surgery, mean BMI pre-operatively is  $20.11\text{kg/m}^2$  as compared to  $18.93\text{kg/m}^2$  at discharge. Post-operative complication noted as wound infection manifested only in 5.9%. No mortality was recorded. In conclusion, nutritional assessment using simple anthropometric parameter of Body Mass Index (BMI) is recommended for all surgical patients in order to hasten recovery and reduce post-operative morbidity.

**Key Words:** Anthropometry, Body Mass Index (BMI), Nutrition, Surgery.

## Visual Anatomy and the Art of Ancient Igbo Societies of Southeastern Nigeria

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### ABSTRACT

Anatomy is a visual science based on vividly describing the observations seen, at times, through a medium. Hence, the philosophy of visual art might well offer an epistemological basis for the complexity of study of human anatomy in a meaningful way. In this paper, we present the part of our research work on some aspects of structural anthropology associated with the Igbo societies of Southeastern Nigeria. This work gives information on the visual anatomy as depicted by the artistic impressions of the *Ikenja*.

**Key words:** Visual Anatomy, *Ikenja*, Igbo.



## **Thrombocythaemia in an Aestivating African Lungfish, *Protopterus Annectens* (Owen) from Anambra River, Nigeria**

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### **ABSTRACT**

After one month in which live specimens of the African lungfish, *Protopterus annectens* (mean length 38.2cm, mean weight 278.3g) procured from Anambra River at Otuocha in Anambra State, Nigeria were aestivated in the laboratory, there was a significant increase in blood platelet counts ( $p < 0.05$ ). The implications of the findings in the stabilization of aestivation process are discussed.

**Key Words:** Aestivation, Blood Platelets, *P. Annectens*

## **The Role of Genetic Inheritance in the Development of Palmar Creases**

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### **ABSTRACT**

The study investigated the role genetic inheritance in the development of palmar crease. Various generations of ten families involving 128 in the South Eastern part of Nigeria were studied. The pedigree of the first family affecting four generations was subjected to statistical analysis to determine the influence of inheritance in the pattern of palmar creases of the family members. The role of genetics was found to be highly significant ( $p < 0.001$ ) furthermore a careful observation of the pedigrees of the other families gave a clear indication of the role of genetics in the development of creases. Therefore, genetics is seen to have a positive role in the formation of palmar creases. However, the mode of inheritance, whether monogenic or polygenic needs to be determined.

**Key Words:** Palmar Crease, Pedigree, Genetic Inheritance.

## **Dermatoglyphic Patterns in Androgenetic Alopecia in A South Eastern Nigerian Population**

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### **ABSTRACT**

This study was carried out to determine any characteristic dermatoglyphic patterns associated with androgenetic alopecia in South Eastern Nigeria. Dermatoglyphic analysis of three hundred (300) subjects comprising one hundred and fifty (150) androgenetic alopecians and one-hundred and fifty (150) normal subjects (non-alopecians) was carried out. The subjects were all of Igbo tribes selected at random from Enugu, Imo and Anambra States. Their grand parents were also from Igbo ethnic group. The parameters studied included: the digital patterns, digital ridge count, atd angle, dat angle and crease pattern. The results on the digital patterns showed that whorl had the highest percentage in all the digits of the alopecia's while ulnar loop had the highest percentage in normal individuals. The digital ridge count was significantly higher ( $p < 0.05$ ) in alopecians than normal individuals. Also the atd and dat angles in angles in alopecians were significantly higher ( $p < 0.05$ ) than normal subjects. However, there were no cases of Sidney and Simian crease in both groups. The above named parameters (digital pattern, digital ridge count, atd and dat angles) which showed significant differences between the two groups are suggestive of characteristic patterns in alopecians. These are important features for identification and medical diagnosis of alopecia.

**Key Words:** Alopecia, Dermatoglyphics, Patterns.

## **Comparative Effects of HIV and Malaria Infections on Certain Haematological Indices in Children A Hospital Based Study in Enugu.**

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### **ABSTRACT**

This one-year hospital based study investigated the effects of malaria and hiv infections on certain haematological indices in children aged 0-13 years old. HIV screening was carried out using the quick test kits for hiv-1 HIV-2 while malaria parasitaemia was determined by using both thin and thick peripheral blood films stained with Leishman's and Geimsa stains examined under microscope. Hb levels of PCV were also carried out. Total and differential white cell counts were determined. The results showed that the higher the malaria parasitaemia, the lower the PCV and total white cell count with a higher neutrophil level. HIV infections caused a decrease in PCV and an increase in total white cell count with increased lymphocyte levels. Both infections decreased PCV to levels indicative of moderately severe anaemia. In high malaria endemic regions like Sub-Saharan Africa, a co-infection with HIV would not only worsen anaemia because of its adverse effects on blood cells but increase the mortality rates among the paediatric age as we observed in only one patient with HIV co-morbid malarial infection.

**Key Words:** HIV, Malaria, Haematological Indices, Infection, Children.



## **Haematological Changes Following Vitamin E Supplementation During Caffeinated And Non-caffeinated Paracetamol Administration in Rats.**

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### **ABSTRACT**

Haematological changes associated with caffeinated and non-caffeinated paracetamol administration with or without Vitamins A and E supplementation was investigated in albino Wistar rats using panadol extra and paracetamol as caffeinated and non-caffeinated paracetamol respectively; and water soluble acetic acid derivatives of Vitamin E. administration of paracetamol alone caused a significant increase ( $p < 0.05$ ) in Hb compared to the control while panadol extra + vitamin E caused a significant decrease ( $p < 0.05$ ) compared to paracetamol group. The PCV significantly decreased ( $p < 0.05$ ) in the paracetamol + vitamin E group, while the RBC count significantly decreased in the panadol extra + vitamin E group compared to the paracetamol group. Caffeination, vitamin E produced significant decrease ( $p < 0.05$ ) in WBC count when co-administered with paracetamol compared to the group on paracetamol alone. The result suggests that administration of paracetamol without caffeine or supplemented with vitamins E may result in anaemia and leucocytosis, and supplementation with vitamins E may play a role in remitting these adverse changes. However, administration of vitamin E tended to potentiate the adverse haematological changes during caffeinated paracetamol therapy.

**Key Words:** Acetaminophen; Caffeine; Vitamin E; RBC; Hb; PCV; WBC.

## **Incidence of Psoas Minor Muscle in Nnewi, South-East Nigeria.**

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### **ABSTRACT**

The psoas minor [P. minor] muscle is one of the paired muscles of the posterior abdominal wall. It arises with the highest fibres of psoas major from T12-L1 vertebrae and the intervertebral disc. It inserts by a long tendon at or near the iliopubic eminence and iliac fascia. Various authors describe different percentage incidences and differing modes of insertion. Some authors add it only as a footnote while some quote it just as not always present and some stated that it is unimportant. We decided to document its incidence and characteristics in our environment.

We found psoas minor muscle in only one cadaver out of twenty (20) cadavers dissected over a two-year period, October 2003 to September 2005. This gives only a five percent (5%) incidence as against 40%-60% quoted in most literature. In this cadaver, we also discovered that its development was different on the two sides.

**Key Words:** Psoas Minor, Anatomic Variation, Incidence, Posterior Abdominal Wall.

## **VOLUME: 5 NO 1**

## **Sonographic Evaluation of Normal Renal Indices in an Adult Nigerian Population**

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### **ABSTRACT**

The objective of this study was to evaluate sonographically the normal renal indices among Southeast Nigerian adults and to verify possible correlations with age, height and body weight. A total of 310 subjects (135 men and 175 women) were randomly selected for the study. The subjects' ages ranged from 18 to 80 years (mean =  $38 \pm 10.6$  years). The heights of the subjects ranged from 1.85m (mean =  $1.64 \pm 0.08$ m) whereas their weight ranged from 46 to 102kg (mean =  $65.8 \pm 6.3$ kg). The mean body surface area (BSA) was significantly greater in men than in women ( $p < 0.05$ ). There was no statistically significant difference between the mean renal indices (RI) of men and women for the right and left kidney respectively ( $p > 0.05$ ). When both sexes were combined, the mean left RI was found to be statistically greater than the mean right RI ( $p < 0.05$ ). Thus the normal values of RI are  $25.65 \pm 3.62$ cm and  $26.68 \pm 3.64$ cm for the right and left kidneys respectively. There was poor correlation of RI with subjects' age, height and body weight, which may be due to non-dependence of RI on body size. Results suggest that renal index is a good parameter for the assessment of renal size in adults because it is independent of gender and body size.

**Key Words:** Renal Index, Biometry, Ultrasonography.



## **Lactational Exposure to an Aqueous Extract of Hibiscus Sabdariffa (HS) Accelerates Offspring's Early Postnatal Growth in Sprague-Dawley Rats**

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### **ABSTRACT**

This study was designed to evaluate whether or not lactational exposure to HS affects offspring's postnatal growth.

Three groups (five rats per group) of pregnant Sprague-Dawley (SD) rats were used for this study. Group C had tap water while groups A and B had 0.6g and 1.8g HS extract respectively in 100ml tap water to drink throughout pregnancy. All groups had normal rat chow ad libitum. On the day of birth, birth weight were recorded and four pups from each dam in group C were substituted for 4 pups (two pups each) from dams in groups A and B. thereafter, weights were recorded at 10days, 14days, 20days and 34days postpartum. Results of the present study show a statistically significant growth increase ( $p < 0.05$ ) at 20 and 34 days postpartum compared with group C pups.

From the present study, we conclude that lactational exposure to an aqueous extract of HS accelerates offspring's early postnatal growth through a mechanism not yet known.

**Key Words:** Lactational Exposure, Hibiscus Sabdariffa, Postnatal Growth

## **Folic Acid and Embryonic Development A Literary Up-date**

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### **ABSTRACT**

**Background:** Folic acid, a commonly prescribed antenatal prophylactic drug is essential for the normal development and growth of the conceptuses, and healthiness of the mother. The laxity in the seriousness of adherence to the medical advice on supplemental intake of the drug by women of reproductive age and particularly at pregnancy among the rural dwellers calls for a re-look into the dangers of such negligence and a re-emphasis of the need for compliant.

**Methods:** Retrospective and contemporary literature reports on the importance of folic acid and the toxicity of its deficiencies during embryonic development both clinically and experimentally were compiled and presented.

**Observation:** Most information obtainable on the importance of folic acid had been via experimental approach; with little efforts and emphasis at relating these to the clinical manifestations of the vitamin cum public awareness.

**Conclusion:** Frantic efforts at orientation to strict adherence of the supplemental dosage of 5mg daily of folic acid at pregnancy, plus fortified meals would prevent or alleviate the fetomaternal anomalies usually associated with the vitamin deficiencies.

**Key Words:** Folic Acid; Embryonic Development.

## **The Study of Conicity Index and Waist Hip Ratio in Nigerian Children and Adolescents**

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### **ABSTRACT**

Since the introduction of the conicity index by Valdez et al, (1992) the conicity index has been applied to assess the central distribution of fat as a risk of cardiovascular diseases. This study was conducted to apply this index to investigate the fat distribution pattern of Nigerian children ( $n = 240$  boys and  $n = 211$  girls) 3 to 15 years of age, grouped as 3-5 years, 6-10 years and 11-15 years. Anthropometric variables increase from 3-5 years age group to 11-15 years age group, with a significant difference ( $p < 0.001$ ) in both boys and girls, only the triceps skin fold fails to show significant difference. The means of conicity index and the waist-hip ratio decrease with the increase in age of the subjects with the 3-5 years age group having higher means and 11-15 years having lower means with statistical significance ( $p < 0.001$ ). Correlation and regression analyses were used to establish relationship between conicity index, waist hip ratio and anthropometric variables. The study shows that central fat distribution decreases as an individual ages and becomes peripherally distributed, explaining the decrease in conicity index and waist-hip ratio, which is more pronounced in the girls.

**Key Words:** Conicity Index, Waist-Hip Ratio, BMI, Fat Distribution, Boys, Girls, Nigeria.



## Ethnic Differences in Birth Weight and Cesarean Deliveries in Zaria, Nigeria

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### ABSTRACT

Numberous biological traits shown significant difference in respect to ethnicity, newborn characteristics and mode of delivery. This study of birth weight was conducted at the Ahmadu Bello University Teaching Hospital, Zaria to check the variation among the three major ethnic groups in Nigeria (Hausa, Igbo and Yoruba). A dataset of 2163 (Hausa n = 1268, Igbo n = 367 and Yoruba n = 528) maternity records covering deliveries for eight years (1996-2004) was used for this study. The result showed that there is a significant difference ( $p < 0.001$ ) in the mean birth of the three ethnic groups. The prevalence of cesarean deliveries among the ethnic groups significantly associated with the Igbo ethnic having higher percentage (Hausa 7.18%, Igbo 12.33% and Yoruba 6.89%;  $\chi^2 = 11.33$ , df = 2,  $p = 0.003$ ). This study has shown that the Igbo ethnic groups have higher birth weights, which may be the predisposing factor to higher percentage of cesarean deliveries.

**Key Words:** Birth Weight, Ethnic, Hausa, Igbo, Yoruba, Cesarean Delivery, Zaria.

## Thyromental Distance of Adult Nigerian Population: A Pilot Study

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### ABSTRACT

The thyromental distance (TMD) is a predictive indicator of the ease of endotracheal intubation. Studies in Caucasian populations have established a cut-off point whose positive predictive value can be improved upon when combined with other anthropometric indicators such as mallampati score, inter-incisor gap and atlanto-occipital extension. We determined the thyromental distance of 533 adult Nigerian subjects of different tribes and locality who were recruited by simple random sampling technique.

The range of thyromental distance (TMD) was 6-11.5cm. the mean value for males was  $8.72 \pm 1.03$ cm and  $8.23 \pm 1.10$ cm for females ( $p < 0.01$ ). 1.3% of the sampled population had a TMD of less than 6.5cm.

**Key Words:** Thyromental Distance, Nigeria, Adult.

## Gender Related Variations in Sternomental Distance of Young Nigerians.

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### ABSTRACT

A useful screening test for risk of difficult laryngoscopy is the measurement of the sternomental distance (SMD). It has not been clearly shown to vary with height, age and gender in adult populations. We investigated this anthropometric index in one thousand, randomly selected undergraduate students of the University of Port-Harcourt. The mean values of SMD was  $16.8 \pm 1.6$ cm for males and  $15.9 \pm 1.4$ cm for females (significant at  $P = 0.01$ ). The SMD had no relationship to the height and age of the subjects investigated.

**Key Words:** Sternomental Distance, Gender, Nigeria, Laryngoscopy.

## Pattern of Certain Anthropometric Parameters of Apparently Healthy Young Adult Nigerians: Implications for Cardiovascular Diseases and Assessment of Obesity

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### ABSTRACT

The pattern of certain anthropometric parameters of the medical students at Abia State University, Uturu Nigeria were studied with a view to determining their implication for cardiovascular diseases and obesity. A total of eighty (80) medical students made up of forty-five (45) males and thirty-five females aged between 19-30 years were studied. Their waist, hip circumference, height, body mass index (BMI) and arterial blood pressure were estimated using standard procedures. The results showed that 88.8 percent had BMI indicative of normal range; 18.7 percent were overweight while 2.5 percent had class 1 obesity. It was observed that 12.5 percent were both underweight and overweight respectively within the age range data. Students with normal weights had normal blood pressures while the overweight ones had blood pressure ranges indicating high blood pressure. It is probable that the overweight and obese students in this study could develop cardiovascular diseases and worsen obesity with a predisposition to severe heart conditions if they are not checked.

**Key Words:** Anthropometric Parameters, Body Mass Index (BMI), Blood Pressure, Waist Hip Ratio (WHR), Obesity, Cardiovascular Diseases.



## **Anthropometrical Study of the Sella Turcica in A Nigerian Population.**

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### **ABSTRACT**

Anthropometrical data related to the length and depths of the sella turcica without any pathological defect were measured. The subject sampled included 527 Igbos and 459 Yorubas. The pooled samples (986 cases) have the mean value of  $6.86 \pm 1.21$  mm, for depth and  $11.97 \pm 1.56$  mm, for length. The mean length of the Sella turcica was  $10.92 \pm 1.56$  mm for the Igbos and  $11.10 \pm 1.47$  mm for the Yorubas. The mean depth of the sella turcica for the Igbos was  $5.52 \pm 0.89$  mm, and  $6.96 \pm 1.38$  for Yorubas ( $p < 0.05$ ). The dimensions were significantly higher in the Yorubas. The regression equation of the straight line that passes through a significantly correlated distribution is  $\text{Depth} = 0.6737 \times \text{Age} + 670803$ ,  $\text{length} = 0.10922 \times \text{Age} + 9.58621$ . The correlation coefficient is significant at  $P = 0.005$ . In clinical practice increase or decrease in size of the sella turcica are manifestation of several diseases. The values obtained from the sample were relatively smaller than the Caucasian values (Camp 1923).

**Key Words:** Sella Turcica, Length, Depth, Pituitary Tumour.

## **Penile Ultrasonography: Anatomy and Scanning Protocols**

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### **ABSTRACT**

**Objective:** This article is intended to provide a short review of the normal anatomy of the Penis, Scanning protocols and various imaging manifestations of penile disorders. Penile anatomy, cases of Penile tumour and trauma that present pertinent acoustic signatures are reviewed. Ultrasonography in conjunction with colour and pulsed Doppler imaging is important in the assessment of penile disorders. The normal sonography anatomy of the penis, scanning techniques and various penile disorders are discussed. Sonography (particularly with Colour Doppler Sonography) is a useful method for the evaluation of penile anatomy and also investigating the pathologic consequences of trauma and tumours.

**Key Words:** Penile Anatomy; Penile Trauma; Ultrasonography.

## **Prevalence of Neck, Upper Back and Chest Musculoskeletal Symptoms Among Medical Students in Ebonyi State**

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### **ABSTRACT**

Patterns of Musculoskeletal symptoms have been reported among student populations. The prevalence of neck, upper back and chest musculoskeletal symptoms was studied among medical students. A 23-point questionnaire was distributed to the students. 247 were returned and analyzed. Results showed that 83.4% reported symptoms of Musculoskeletal pains in the neck (46.6%), upper back (42.7%) and chest (25.7%). There was no correlation between their occurrence and age, sex and working hours. Only chest pain was related to type of chair used by students ( $P = 0.036$ ). These results suggest that there is a relatively high prevalence of Musculoskeletal symptoms among medical students, which is related to stress and postural discomfort. Efforts should be made by medical schools to improve on the quality of learning environment and incorporate ergonomic principles to the medical curriculum.

**Key Words:** Musculoskeletal Symptoms, Medical Students, Neck Pain, Upper Back Pain, Chest Pain.

## **Handedness Among the Igbos of Southeastern Nigeria**

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### **ABSTRACT**

This study investigated the frequency of left-handedness (left hand dominance) among the Igbos of south Eastern Nigeria. It was related to sex and age. Questionnaires, interview and observations were the research instruments used in this study. The study involved 2794 subjects. The frequency of left handedness was found to be 4.72%. Males were found to be more left-handed with increasing age. All these observations were statistically significant.

**Key Words:** Left-Handedness, Male, Female, Igbos.



## **Histological and Morphometric Studies on the Age-Associated Changes in the Colon of the Mouse.**

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### **ABSTRACT**

The present work was designed to study the morphological and morphometric age-associated changes in the mouse colon in order to explore any changes that might lead to colon dysfunction.

Forty mice were used in this study. They were divided equally into four groups aged 1, 2, 12 and 24 months. Light microscopy and scanning and transmission electron microscopic examinations of the colon were conducted. Measurements of the outer diameter of the colon, the total wall thickness, the crypt's length and the muscle coat thickness were carried out. Statistical analyses of the results were done.

In old aged mice (12 and 24 months) there was apparent decrease in the number of goblet cells and marked increase in the amount of collagenous fibers in the mucosa and submucosa compared to the young aged mice (1 and 2 months). Statistical analysis showed a significant increase in the outer diameter and the length of the crypts in old aged mice. In addition a significant decrease in the nerve cell number of Auerbach's plexus was also recorded. Using TEM there was an apparent reduction in both the striated border and the intercellular spaces in the mucosal epithelium of the old mice. In addition there was a marked increase in the undifferentiated stem cells at the bases of the crypts. Using SEM many areas of denuded epithelium were also observed in old mice.

The remarkable decrease in (1) the number of mucosal goblet cells and microvillar and intricate systems, (2) the number of neurons and interstitial cells of Cajal in the myenteric plexus, (3) the muscle wall thickness, with the observed increase in deposition of collagen fibers in the mucosa and submucosa of old-aged mice colon probably contribute to colon dysfunction in elderly.

**Key Words:** Colonic Mucosa, Goblet Cells, Colonic Crypts, Collagen, Auerbach's Plexus.

## **Biacromial and Biiliac Diameters in A Young Adult Southeastern Nigerian Population.**

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### **ABSTRACT**

Reference standards of anthropometric measurements for any given population form the basis on which populations can be compared with one another. Relationship between body physique and certain diseases has long been recognized. The aim of the study was to provide normal values of biacromial and biiliac diameters for a young adult southeastern Nigerian population. A cross sectional study of 402 male and 268 female students of University of Nigeria Enugu Campus was done. Their ages ranged from 20 to 28. The mean values of biacromial diameter in males and females were 40.1 ± 1.8cm and 36.3 ± 1.8cm respectively. The corresponding values for biiliac diameter were 25.5 ± 1.3cm and 25.9 ± 1.3cm respectively. Males had significantly larger values of biacromial diameter than females while females had significantly larger values of biiliac diameter than males,  $p < 0.001$ . The subjects had larger mean values of biacromial diameter than most of the Caucasian and Asian populations. On the contrary the mean values of biiliac diameter were lower than the Caucasian and Asian values.

**Key Words:** Biacromial and Biiliac Diameters, Nomograms, Adult Southeastern Nigerians.

## **VOLUME: 5 NO 2**

### **A Case Report of Complete Situs Inversus**

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### **ABSTRACT**

A 45 year male while being dissected during undergraduate teaching was discovered as a case of complete situs inversus, a rare congenital abnormality. The thorax and the abdomen dissection revealed a complete mirror image of the normal visceral arrangement. The heart possessed an atrial septal defect. The abdomen revealed enlarged spleen, liver and gall bladder. The gall bladder was full of stones, with stones present in the common bile duct, too. The left kidney had an accessory renal artery supplying it. Our aim is to describe the anatomic relations of the viscera in the situs inversus, so as to decrease the incidence of the mishappenings in the clinical practice and to correlate the anomaly embryologically, which in this case seems to be due to the defect in the lateralization.

**Key Words:** Atrial Septal Defect, Kartagener's Syndrome, Mirror-Image Organs, Complete Situs Inversus, Situs Solitus.



## **Anatomical Defects at Hysterosalpingography in Patient With Infertility at the University of Nigeria Teaching Hospital Enugu, Nigeria**

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### **ABSTRACT**

Hysterosalpingography (HSG) is a fluoroscopically guided contrast examination of the female genital tract using about 10-20ml of contrast media usually urografin in our environment. It queries the integrity of the female genital tract in clinically suspected cases of infertility. This research study has been designed to find out the various structural changes at HSG in patients with infertility in our environment. It gives a retrospective review of 100 patients who underwent HSG in UNTH Enugu using water-soluble ionic contrast media (urografin 10-20ml). Clinical notes and radiographic findings were retrieved and thoroughly analyzed. The commonest age group seen was 31-36yrs. Most were of low parity. Secondary infertility was seen to be much commoner than primary infertility. Abdominal findings at HSG were found in 75% of patients. The commonest findings were tubal blockage. The commonest pathology found on HSG on women presenting with infertility in UNTH, Enugu is tubal blockage possibly secondary to chronic (PID). Studies to establish associated factors are recommended.

**Key Words:** Anatomical Defects, Hysterosalpingography, Infertility

## **Sonographic Assessment of Normal Prostate Sizes Within Age Groups Among Benue People of Nigeria**

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### **ABSTRACT**

The aim of this study is to establish normal prostate sizes within age groups among Benue People of Middle Belt region of Nigeria using transabdominal pelvic sonography. The prostate length, anteroposterior and transverse diameters were measured in 158 subjects at Federal Medical Centre, Makurdi and Hospital of immaculate Conception, Makurdi using transabdominal pelvic sonography. The subjects were aged 9 to 100 years (mean  $27.65 \pm 17.55$  years). Their height ranged from 93cm to 186cm (mean  $169.20 \pm 24.61$  cm) and they weighted between 21 and 101kgs (mean  $66.76 \pm 17.55$ kg). The mean prostate volume for 19 years and under, 20-29, 30-39, 40-49, 50-59, 60-69, 70-79, and 80 years and over are  $8.78 \pm 5.24\text{cm}^3$ ,  $13.69 \pm 3.28\text{cm}^3$ ,  $15.09 \pm 7.77\text{cm}^3$ ,  $18.63 \pm 5.68\text{cm}^3$ ,  $19.04 \pm 5.59\text{cm}^3$ ,  $24.91 \pm 6.18\text{cm}^3$ ,  $34.41 \pm 30.73\text{cm}^3$  and  $32.45 \pm 16.30\text{cm}^3$  respectively. The results show a strong relationship between prostate volume and age ( $r = 0.5$ ). Prostate volume did not correlate well with height ( $r = 0.1$ ) and weight ( $r = 0.1$ ). The study established the baseline data for assessing the normality of prostate volume among Benue People of Nigeria.

**Key Words:** Prostate Sizes, Ultrasound, Prolate Ellipse.

## **The Involvement of Effector Cells in Diabetic Neuropathy in Drug-Induced Diabetic Rats**

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### **ABSTRACT**

Changes in neuronal morphology have been shown to occur in many pathological conditions involving the nervous system. The effectors cells of the monocyte/macrophage system have been involved in myelin removal during nerve degeneration. The present study was aimed at investigating the involvement of the effector cells in diabetic neuropathy of peripheral nerves in drug-induced diabetic rats. Albino (Wistar) rats used in the study were administered with diabetogenic dose of alloxan and were separated into 3 groups (A, B and C). Group A was the control while groups B and C were used as the test groups. Parts of the peripheral nerves were transacted and prepared for microscopy. The result from the test groups revealed morphological changes; myelin sheaths were collapsed, axonal structures degenerated and numerous infiltrated cells of the monocyte/macrophage system. The number of axons and myelin density were significantly decreased ( $p < 0.05$ ) while the number of Schwann cell nuclei and infiltrated macrophages were significantly increased ( $p < 0.05$ ) the observation suggests that the axonal breakdown play important role in the recruitment of effector cells of the macrophage system in the degenerating nerves in diabetic neuropathy of rats.

**Key Words:** Effector Cell, Neuropathy, Diabetic Rats.



## Normal Heart Size of Nigerians Within the Southeast Using the Cardiothoracic Ratio

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### ABSTRACT

This research considered the heart sizes of one thousand and eighteen adult Nigerians of both sexes within the southeast as a result of racial variations, which has been noted to affect the sizes of the heart. Their posterior-anterior chest radiographs were obtained and the heart sizes were established using the method of cardiothoracic ratio (CTR) established by Danzer in 1919. a mean CTR value of 46.7 ± 4.3 was established for the sampled population and mean values of CTR set for the various age categories of the male and female populations. A lower and upper limit of normalcy of the CTR values for the studied sample was recorded to be between 40 and 50%.

**Key Words:** Cardiothoracic Ratio, Heart Diameter, Chest Radiograph.

## Clinico-Anatomical Pattern Of Presentation of Upper Urinary Tract Stone Disease In Nnewi, South-East Nigeria

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### ABSTRACT

A total of eighty-nine (89) Nigerians presented with symptomatic stone disease over a five year period. Made up of fifty-four (54) males and thirty-five (35) females (M: F, 1.5:1). The peak age incidence of stone disease was seen between 30-50 years. Seventy-eight (91%) of the stones occurred in the upper urinary tract. Of this number 41 (52.6%) occurred in the left upper tract thirty-seven (47.4%) occurred in the right upper tract. This observed difference although not statistically significant ( $p > 0.05$ ) may be attributed to known anatomical differences between the left and right kidneys. Large multicenter study is needed to confirm this finding.

**Key Words:** Urinary Tract Stones, Supersaturation.

## Effects of A Diet Containing Garcinia Kola Seeds on the Blood OG Adult Male Wistar Rats

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### ABSTRACT

To study the effects of ingestion of Gkola diet on the blood profile of adult wistar rats. Forty adult male wistar rats were used. They were obtained from the animal house of the Faculty of Pharmaceutical sciences, University of Nigeria Nsukka and divided into four (4) groups I-IV of ten (10) rats each. They were acclimatized to the conditions of the animal house of the University of Nigeria Teaching Hospital Enugu for a period of two (2) weeks. Groups I, II, and III were fed 30% w/w, 20% w/w and 10% w/w Gkola diet respectively while group IV served as control and was fed ad libitum with growers mash.

At the end of the experimental period of 10 weeks the rats were starved overnight and their blood samples were collected in heparinised tubes. The blood samples were analyzed using routine laboratory methods. Fasting Blood Sugar (FBS) packed Cell Volume (PCV), while Blood Cell (WBC) count (total and differential) were analyzed. There was a decrease in blood sugar as dose increases. The mean PCV and lymphocyte count increased as dose increases, while the eosinophils, neutrophils and monocytes decreased as dose increases. The values were subjected to statistical analysis.

The dose dependent decrease in blood glucose proved significant only between groups I, (30% w/w) and IV (control), when compared using student's t-test. The results were discussed.

**Key Words:** Medicinal Plants. Biflavonoids. Hematological Parameters.

## The Diuretic Effects of Ethanol Ingestion in Wistar Rats

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### ABSTRACT

Of all potential substances of abuse, alcohol is one of the most readily available. Most adults regularly or occasionally consume it. The habitual urination immediately following ingestion was experimentally studied in the ethanol fed-Wistar rats.

Experimental equivalent concentrations of ethanol: 10% 20% and 30% v/v in the respective alcoholic beverages: lager beer, wine and dry gin were administered separately to three groups of Wistar rats orally and the quantity and durations of urinations carefully monitored.

The shortest time lag and time interval respectively, 20 minutes and 9 minutes, and highest volume of urine 7.56ml, were recorded in the 30% ethanol-fed rats.

The anti-diuretic action of vasopressin is actively suppressed by ethanol direct inhibition of the hormone secretion in supra-optic nuclei; this inhibitory potency of ethanol is concentration dependent.

**Key Words:** Diuresis; Wistar; Ethanol



## Sex Differences in Tarsal Coalition in Nigerians

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### ABSTRACT

The study was carried out to determine the incidence of tarsal coalitions and existing sexual differences in Nigerians. Five hundred and seventy-four (574) ankle/foot radiographs comprising 369 male and 205 female radiographs were used. The ages ranged from 6 months to 90 years. The results showed 30 cases of tarsal coalition out of which 17 (56.67%) were males while 13 (43.33%) were females. In males 10 (33.33%) were talocalcaneal coalition, 2 (6.67%) were cubonavicular coalition, 2 (6.67%) were talonavicular, 1 (3.33%) each of naviculo-cuneiform, calcaneonavicular and medial intermediate cuneiform. There was no calcaneo-cuboidal in males. In females, 4 (13.33%) were talocalcaneal, 2 (6.67%) were calcaneo-navicular, 3 (10%) were cuneo-cuboid, 1 (3.33%) was talo-navicular, naviculo-cuneiform, calcaneo navicular and calcaneo-cuboidal each. There was no medial intermediate cuneiform coalition in females. The incidence of tarsal coalition was significantly higher ( $p < 0.05$ ) in males (56.67%) than in females (43.33%). The percentages of tarsal coalition in general population amongst the male and female Nigerians were 2.96% and 2.26% respectively. The total percentage was 5.22%. Thus tarsal coalition exists in Nigeria and has slight male predominance over the female. The study is a good contribution to knowledge.

**Key Words:** Tarsal Coalition, Sex Differences, Nigerians.

## The Arbotifacient and Cuddling Potencies of Oxytocin in the Wistar Rat Animal Model

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### ABSTRACT

The anterior pituitary hormone, oxytocin is well reputed for inducing abortion, hastening labor cum parturition, and prepares the subjects for motherhood. The experimental application of these is presently tested in the Wistar rat animal model.

Adult female Wistar rats of reproductive age were mated and injected with 0.5ug oxytocin on days 5, 10, 15, 18, 19 and 20 of gestation; hormone potencies and animal behaviours were carefully monitored pre-partum. Oxytocin was least effective in the early days of gestation; however, hormone potencies gradually increased as pregnancy advanced.

Both endogenous secretion and exogenous administration of oxytocin was least effective at the initial and mid-phases of pregnancy in the rat. Perhaps if higher dosage of the hormone were administered, the resulting high plasma concentration might probably override the prevailing physiology in the early phase of pregnancy in the uterus though, and such could be effective enough to elicit response possibly, with the accompanied complications.

**Key Words:** Oxytocin, Abortion; Cuddle; Females; Wistar Rat.

## Effects of BCG Vaccination on the Morphometry of Pancreatic Islets of Langerhans of Streptozotocin-Treated Diabetic Rats

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### ABSTRACT

Immune-mediated (type 1) diabetes mellitus (IMD) is an autoimmune disease resulting from chronic destruction of pancreatic  $\alpha$ -cells by auto-reactive T lymphocytes. Although there has been much advancement in diabetes management, targeting the precise etiology of the disease process has remained elusive. Recent progress in the understanding of the immunopathogenesis of IMD, however, has led to new intervention strategies, especially antigen-based therapies given as altered peptide ligands (APL) or as vaccines. There have been many attempts at immunologic modulation as a block or prevention of the underlying process. Recent evidence from animal studies has raised the possibility that immunization by vaccines can influence the pathogenesis of type 1 diabetes mellitus. In non-obese diabetic (NOD) mice and biobreeding (BB) rats, complete Freund's adjuvant (CFA) and Bacille Calmette-Guerin (BCG) vaccines have successfully been used to interrupt or prevent the onset and recurrence of type 1 diabetes. In this study, we investigated the effect of BCG vaccination on multiple low dose streptozotocin-induced diabetes (MLDS) in mice, with particular emphasis on the immunohistochemistry and morphometry. The mice were pretreated with BCD vaccine, 7 days before starting multiple low dose streptozotocin (STZ). We observed the effects of BCG vaccination on the body weight, blood glucose concentration, serum insulin, pancreatic insulin contents and quantitative analysis of islet morphology/viability of the STZ-induced insulinitis after the animals were sacrificed the findings of the present study showed that BCG-treated mice improved in body weights, serum insulin, and pancreatic insulin contents and reduced blood glucose concentration. There was also a reduction in the level of  $\alpha$ -cell apoptosis, and a significant ( $p < 0.05$ ) increase in  $\alpha$ -cell regeneration, and  $\alpha$ -cell mass. Our results suggest that BCG vaccination exerts some positive effects in the diabetic state by proving cellular integrity of islet cells, and drastically reducing the development of insulinitis and overt diabetes in MLDS diabetic mice.

**Key Words:** Immunoregulation; MLDS; Mycobacterium; Morphology; Apoptosis; Regeneration; BCG Vaccination; Type 1 Diabetes.



## Scapula Morphometry of Adult Nigerians in the Southeast

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### ABSTRACT

Twenty-five adult bony Scapulae of Nigerians were used to report detailed bony dimensions of the scapula. The average length of the scapulae was  $146.24 \pm 6.78$ mm, the mean spine length was  $126.83 \pm 7.29$ mm and acromial dimensions were  $45.46 \pm 4.03 \times 21.91 \pm 2.07$  and  $7.36 \pm 1.30$  thick (mm). Glenoid dimensions showed that anteroposterior diameter =  $26.54 \pm 1.86$ mm, superoinferior diameter =  $37.72 \pm 1.65$ mm and diameter at glenoid constriction =  $19.58 \pm 1.35$  (mm). Coracoid dimensions were  $39.20 \pm 2.67$ mm  $\times$   $9.30 \pm 2.12 \times 14.48 \pm 1.36$ mm. The average diameter of scapular notch was  $14.90 \pm 2.94$ mm. Also 52% of Scapula notch were U-shaped and 92% of acromion were curved. The average thickness of the lateral border was  $11.72 \pm 1.23$ mm. Glenoid dimensions correlated with all acromial dimensions except the acromial thickness. This detailed study of scapula dimensions will provide information for surgical procedures and detection of significantly displaced scapular fracture.

**Key Words:** Scapula, Morphometry, Nigerians.

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### Gross Anatomical Modelling: University of Port Harcourt Experience.

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### ABSTRACT

Anatomical modeling is the production of three-dimensional representation of the human body using design from different materials. The concept has been brought to the fore due to difficulty in obtaining and preserving cadavers and the attendant overcrowding in dissecting rooms, variations present in cadaveric specimen and the need to learn layout recreate common surgical operations. The methodology involved a collaborative research between the Department of Anatomy and that of Fine Arts and Design, using a combination of clinical and studio approach in the production of models of various body parts for students of Health Science and Biology. Transverse sections were also drawn out to demonstrate the three-dimensional view of particular body parts, thereby enhancing the value of the model. It is our hope that more improved models would be produced at more affordable prices and at commercial quantities, to make them more available to meet the needs of our Universities and Health Institutions and in line with the National Universities Commission's (NUC) guideline on saleable research. The products have been exhibited in the Conference of the Anatomical Society of Nigeria which held in Abraka, Delta in September 2006

**Key Words:** Specimen, Sculpturing, Commercial.

### The Study of Hirsutism In Nigeria: A Case Study of Female Students at the Ahmadu Bello Univsity, Zaria.

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### ABSTRACT

The prevalence of hirsutism was studied among 302 female students of the Ahmadu Bello University, Zaria with mean age  $23.82 \pm 3.19$  (SD). Hirsutism was assessed following the McKnight method of hair distribution. This was done by checking for the presence of hair on androgenic sensitive areas of the body which include the face, chest, anterior abdominal wall, and shoulders, upper and lower limbs. Fifty six percent (56%) of the populations were found to be hirsute. The study was conducted on the major tribes in Nigeria, which included the Hausa, Yorubas, Igbos, Tivs, Igalas, Ebiras, and others (minority tribes). The study indicated that there is an association between tribe and hirsutism as shown by  $\chi^2 = 21.42$  df 6 and  $P = 0.002$ , but there is no association between age and hirsutism  $\chi^2 = 8.00$  df 4  $P = 0.09$ . The results seem to suggest a genetic basis of the disorders among Nigeria females than any other environmental factor.

**Key Words:** Hirsutism, Nigeria, Prevalence, Ethnic Groups, Associated Disorder

### Gastric Mucosal Changes in Indomethacin-Induced Ulcers Following Long Term Oral Feeding with Coconut Extracts in Male Rats.

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### ABSTRACT

Changes in histology of mucosa with induced gastric ulcers following oral feeding of coconut milk and water in male albino rats were studied. 40 male albino rats divided into four study groups made of ten animals were used for the study-control (group i), coconut water fed (group ii), coconut milk fed (group iii) and sucralate fed (group iv). Aqueous test substances were administered by gavage daily after ulcer induction for 28 days. Gastric mucosal ulcerations were induced with indomethacin and administered subcutaneously. The animals were allowed free access to food and water ad libitum. Stomach specimens were subjected to



histopathological analysis. The results of the analysis showed that there were extensive gastric pits and ulcer sites with mononuclear (leucocyte) cellular infiltrations in the control. In the coconut water group, increased mononuclear cellular infiltrations with loss of gastric glands and chronic inflammation were observed. The photomicrographs of the coconut milk and sucralfate groups similar cytostructure with reduction in the ulcer diameters, pin-point ulcers, more abundant mononuclear cellular infiltrations. These findings reflect cytoprotection and healing of the gastric mucosal structure damaged by indomethacin-induced ulceration. That the same effects were observed in the coconut milk and sucralfate groups but not in the coconut water confirm the conventional usage of sucralfate as a cytoprotective agent. It is concluded that coconut milk provided a stronger cytoprotection than coconut water, and that coconut milk may have acted via same pathway as sucralfate.

**Key Words:** Coconut, Ulcerations, Cytoprotection.

## **Comparison of Prostatic Volume Estimates by Transrectal and Suprapubic Ultrasonography in A Nigerian Population.**

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### **ABSTRACT**

The aim this study is to establish prostatic volumes in normal adult Nigerians using Transrectal Ultrasonography (TRUS) and suprapubic Ultrasonography (SPUS). It will also compare the volumes of the gland as measured by TRUS and SPUS to find out if there is any significant difference in the values of the two methods. 200 men (mean age 35 years) whose age ranged between 25 and 45 years with no symptoms or history of prostatic enlargement consented to undergo TRUS and SPUS screening. Their prostate volumes were calculated using the three dimensional method. The prostatic volumes obtained by TRUS and SPUS were  $20.932 \pm 1.785\text{cm}^3$  and  $21.138 \pm 1.714\text{cm}^3$  respectively. Although there was difference in the values of prostatic volume by TRUS and SPUS, this was not statistically significant. There was good correlation between prostate volume and age ( $r = 0.734$ ). This study shows that SPUS gives a fairly good volume estimate of the prostate and can be used when volume estimate is primary concern. Difficulties experienced in visualizing the echotexture of the cranio-caudal part of the prostate during the course of the study suggest that SPUS is limited in its ability to appreciate echotextural changes in some part of the organ.

**Key Words:** Prostate Volume, Trans-Rectal Ultrasonography, Suprapubic Ultrasonography.

## **A Cadaveric Study of the Fibularis Tertius Muscle**

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### **ABSTRACT**

The Fibular Tertius (formerly peroneus tertius) is occasionally absent in humans, but it is rarely found in other primates. The muscle is a small partially separated portion of the extensor digitorum longus, as its fifth tendon but has an important role in locomotion and in evolution of human beings. It supports and stabilizes the longitudinal arches of the foot while standing and locomotion during bipedalism. It particularly assists in everting the foot, which is characteristically a human movement. In this study, 104 legs were dissected from 52 cadavers. The muscle was unexpectedly absent in a large number of cadavers (26.92%). It was present in (73.08%) of cases.

**Key Words:** Cadaveric, Fibularis Tertius, Dorsiflexion.

## **Sonographic Measurement of Normal Gallbladder Sizes in Adult Nigeria Population.**

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### **ABSTRACT**

The length, height and wall thickness of the gallbladder of 400 healthy subjects, comprising, 206 males and 194 females, were measured in fasted subjects using 2-dimensional (2D) ultrasound to establish the range and mean of normal gallbladder sizes in an adult Nigeria population. The gallbladder volume was calculated from measured values using the ellipsoid equation. Two tailed parametric tests were done to determine any difference in the mean values of the gallbladder volume (GBV) and gallbladder wall thickness (GBWT). The gallbladder dimensions range from 41-96mm (mean  $67.42 \pm 12.22\text{mm}$ ) for the length, 16-44mm (mean  $28.77 \pm 6.08\text{mm}$ ) for the width, 16-44mm (mean  $27.89 \pm 5.36\text{mm}$ ) for the height and 1-3.10mm (mean  $2.30 \pm 0.54\text{mm}$ ) for the wall thickness. The mean GBV was  $31.43\text{cm}^3$  and  $22.60\text{mm}^3$  for males and females respectively compared with  $50\text{cm}^3$  but no statistically significant difference was noted between the sexes. A nomogram of gallbladder dimensions has been obtained from this study and the volume calculated indicates a statistically significant difference in the GBV of the population compared with that of the Caucasians.

**Key Words:** Gallbladder Sizes, Sonography, Nigerian.



## INTRINSIC CARDIAC GANGLIA OF GOAT

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### ABSTRACT

Intrinsic cardiac nervous system plays important role in regulating heart functions both in normal and denervated heart as in case of heart transplant patients. Therefore, the distribution and detailed study of intrinsic cardiac ganglion assumes significance. The present study was conducted on five hearts of goats obtained within one hour of sacrifice of the animal. Light microscopic observations were made on formalin fixed, 10  $\mu$  thick paraffin section stained with Haematoxylin and Eosin and silver stain. Cardiac ganglia were primarily located in the epicardial fat nerve junction of superior vena cava and right atrium as circumscribed structures. Occasionally they were seen in the form of ganglion in the nerve plexus. Occurrence of intramural ganglia was rather uncommon. In sections, ganglia appeared in variable shape from being circular, oval, reniform, club shaped or irregular. Quite often they were associated with a robust bundle of autonomic nerve, which split to invade and surround the ganglion. Most of the nerve cells in the ganglia presented features of large multipolar neurons per ganglion varied from three to forty five. Interestingly, the general arrangement of intrinsic cardiac ganglia in goat resembled more closely to human heart than many other animals and therefore requires further investigation.

**Key Words:** Intrinsic Cardiac Ganglia, Goat Heart, Neurons

## Normal Tibial Metaphyseal-Diaphyseal Angle of Nigerians

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### ABSTRACT

A total of 219 anterior-posterior radiographs of the knees of 111 males and 108 females were used to measure the metaphyseal-diaphyseal angle (MDA) using the Levine-Drennan technique. The mean MDA for males was  $1.55 \pm 1.2$  degrees and  $1.4 \pm 1.2$  degrees for females. These values were noted to be higher in those aged 0-5 years for both sexes. After the age, the MDA gradually approaches the neutral angle of 0 degrees. There was no significant difference between the mean MDA for males and females ( $P > 0.05$ ). The MDA for both males and females was also shown to correlate positively ( $r = 0.689$ ) indicating that sex does not impact significantly on the value of the angle.

**Key Words:** Metaphyseal-Diaphyseal Angle, Blount's Disease, Physiologic Bowing.

## Anatomy Teaching as an Impetus for Medical Students' and Graduates' Interests in the Basic Medical Sciences

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### ABSTRACT

Anatomy is with no controversy the bed rock of competent medical practice. A faulty beginning in medical training in the basic medical subject would tell tales in the resultant poor clinical performances. Lately, although for no laudable reason, the teaching of anatomy had been suffering a downward trend which signposts a dangerous development if allowed in the medical enterprises. The present work takes a look at this from the medical students' perspective with view to raising a cautious alarm and for timely correction.

**Key Words:** Medical Education; Surgery.

## Digital Dermatoglyphics of the Hausa Ethnic Group of Nigeria

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### ABSTRACT

The study of dermatoglyphics is becoming interestingly applied in determining a number of medical and psychological traits like diabetes mellitus, genetic disorders, psychosis and many other clinical conditions in man. This dermatoglyphic study was conducted on 420 subjects (males  $n = 210$  and females  $n = 210$ ) belonging to the Hausa ethnic group of Nigeria. Finger prints were obtained following standard procedures using ink and finger print questionnaires. The result showed a frequency of 29.74% for whorl, 6.62% for arch and of 63.59% for loop. The pattern intensity index showed a higher value in males 12.62 than in the females 11.99. The dankemeijer's index was higher in females, 31.67 than in males 13.10. The Furuhata's index was slightly high in females 47.87 than in the males 45.75. This is due to the abnormally high frequency of radial loops in the females. Ridge counting was done for each finger of 150 males and 150 females and the overall sum of ten fingers was obtained. The total mean ridge count showed statistically significant difference (male =  $101.84 \pm 3.17$ , females =  $97.38 \pm 3.72$ ,  $t = 11.18$ ,  $p < 0.001$ ). the right hands were found to possess higher ridge counts than the left in 2 out of 5 fingers in males and 3 out of 5 fingers in females ( $p < 0.001$ ). Hausa females showed a higher difference in right hand than Hausa males in ridge count and a radically higher frequency of whorl pattern, this may be a signal to higher incidence of breast cancer, which needs further studies for verification.



# Real Time Sonographic Assessment of Common Uterine Sizes, Shapes and Positions in Nigerians

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## ABSTRACT

The uterine dimensions, shape and positions of 700 subjects made up of premenarche, nulliparous multiparous and postmenopausal subjects aged between 9 and 88 years were determined by real time transabdominal sonography. Results obtained show that the uterine dimensions in the premenarche are  $3.94 \pm 0.74$ cm,  $1.76 \pm 0.47$ cm, and  $2.33 \pm 0.84$ cm for the length, thickness and width respectively. In the nulliparous group uterine dimensions are  $5.70 \pm 0.60$ cm,  $3.30 \pm 0.50$ cm, and  $4.10 \pm 0.50$ cm for the length, thickness and width respectively. In the multiparous group the uterine dimensions are  $6.90 \pm 0.80$ cm,  $4.10 \pm 0.70$ cm, and  $4.90 \pm 0.80$ cm for the length, thickness and width respectively. For the postmenopausal group the uterine dimensions are  $5.20 \pm 0.60$ cm,  $2.80 \pm 0.90$ cm, and  $3.30 \pm 0.70$ cm for the length, thickness and width respectively. The uterine dimensions were found to vary according to the age, height and weight of the subjects. The incidences of pear-shaped uterus are 23% for premenarche, 99.2% for nulliparous, 95.2% for multiparous and 77% for postmenopausal groups. Tubular uteri were found in 77% and 21% of premenarchal and postmenopausal subjects respectively. Globular uterus occurred only in 0.8%, 4.8% and 2% of nulliparous, multiparous and postmenopausal subjects. The predominant uterine shape is pear except for the premenarche where tubular uterus predominates. Uterine anteversion was seen in 91.6%, 94.8% and 78% of nulliparous, multiparous and postmenopausal subjects. Uterine retroversion occurred in 8.4%, 5.2% and 22% of nulliparous multiparous and postmenopausal subjects. The incidences of dextro rotated uterus are 98.8%, 99.6% and 100% for nulliparous, multiparous and postmenopausal subjects. Levo rotated uteri were found in only 1.2% and 0.4% of nulliparous and multiparous subjects. There is relatively strong positive correlation between the determined uterine dimension and age, height and weight of the subjects. This study has established normal values of uterine dimension in premenarchal, nulliparous, multiparous and postmenopausal women in Nigeria that can be useful in assessing the normality of the uterus in our locality.

**Key Words:** Uterus, Size, Shape, Position, Sonography.

# Orbit Dimensions and Bony Interorbital Distance in Southeast Nigerians: A Radiological Study

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## ABSTRACT

The objective of this study was to obtain the orbit dimensions and bony interorbital distance in Southeast Nigerians. 350 pairs (217 males 133 females) of plain films of the skull were used. Measurements were taken on films of healthy subjects using a pair of dividers and a meter rule calibrated in millimeters. The parameters include orbital height, width, depth and interorbital distance. Data analysis was done using Microsoft excel version 2000. This work shows orbital height to be  $26.62 \pm 0.27$ mm: orbital width to be  $39.39 \pm 0.17$ mm, orbital depth to be  $54.95 \pm 0.35$ mm and bony interorbital distance to be  $36.84 \pm 0.26$ mm. There was a steady increase in orbit height and width up to 30-39 years age group and 40-49 years age group in males and females respectively. The depth increased up to 40-49 years age group and 20-29 years age group in males and females respectively. The bony interorbital distance increased up to 20-29 years age group and 40-49 years age group in males and females respectively. Thereafter, declines were observed. We found no statistically significant difference in all the parameters studied between males and females. Symmetry was also observed between left and right orbits. These agree so much with the findings of other workers. The interorbital distance for this work ( $36.84 \pm 0.26$ mm) is significantly higher than that of the American population (2.67cm). More so the orbital depth from this work ( $54.95 \pm 0.35$ mm) is greater than that of the Greece population (4.962cm). The difference may be attributed to genetic, racial and environmental factors and this explains in variation in the faces of these different populations.

**Key Words:** Orbit Dimensions, Bony Interorbital Distance.

# Duodenal Atresia Presenting as Premature Labour: A Case Report.

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## ABSTRACT

The case of twenty-four year old primigravida with severe abdominal pains and slight drainage of liquor, which was referred for investigation and further management, is presented. Symphysiofundal height was greater than the estimated gestational age. Ultrasound investigation revealed gross polyhydramnios and a large cystic mass in the foetal abdomen. The cyst measured 102mm



x 78mm. there was also another cystic mass measuring 16mm in diameter seen posteriorly above the foetal diaphragm. No communication was established between the cysts. Two days later, the foetus was expelled prematurely and a distended foetal abdomen with epigastric fullness was observed. The foetus died within two hours after expulsion. A diagnosis of duodenal atresia was therefore established.

**Key Words:** Duodenal Atresia, Ultrasound, Polyhydramnios, Foetus.

## **VOLUME: 7 NO 1**

### **A Rare Variety of Origin of Obturator Artery- A Case Report**

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#### **ABSTRACT**

A rare variety of origin of obturator artery was found while doing dissection on a 54-year-old Indian male. The artery originated from the posterior division of the internal iliac artery. The rest of its course, as well as other branches of the internal iliac artery were normal. Knowledge of such a variation in the origin of obturator artery is important while doing various gynecological, surgical and orthopedic operations. Obturator artery develops due to uneven growth of the anastomosis between developing internal and external iliac arteries. Obturator artery is last to develop amongst the branches of internal iliac artery. This is likely to be the cause of such a variation.

**Key Words:** Obturator Artery, Internal Iliac Artery, External Iliac Artery.

### **A Study of Genetics Using Two Simple Mendelian Inheritances**

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#### **ABSTRACT**

A study was carried out to create an awareness of the significance of genetics and show how people differ. Three hundred and fifty five Students of DELTA STATE UNIVERSITY from the Niger Delta region of Nigeria were examined to know the percentage of the population that had inherited traits such as widow's peak and unattached ear lobes and those that had the two dominant features together. Their ages ranged from 16 years to about 35 years. The ratio of widow's peak to straight hairline of the same sex were approximately 1:1 meaning that the number of people with widow's peak when compared with those having straight hairline approximately the same for both sexes though the percentage of those with straight hairline were more than those with widow's peak in both sexes. Most of the subjects had the unattached earlobe variety in both sexes. The females however showed a remarkably higher incidence of unattached earlobe than the males. The percentage of those with the dominant features of both widow's peak and unattached earlobe were approximately at the same ratio in both sexes and was not up to 50% of the population studied, meaning dominant traits are not necessarily seen more in the population.

**Key Words:** Widows Peak, Straight Hairline, Earlobe Attachment, Niger Delta

### **Health Impacts of Radiofrequency Exposure From Mobil Phones and their Transmitter Base Stations.**

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#### **ABSTRACT**

The widespread use of mobile phones and indiscriminate sitting of transmitter base stations near residential buildings in our environment may have serious health impacts. This report attempts to investigate the possible health risks associated with radiofrequency (RF) exposure from mobile phones and their transmitter base stations. A literature review by internet browsing, Medline and manual search was carried out. There are epidemiological evidences showing that low intensity pulsed radiation from mobile phones and base station antennae have serious health impacts. However, there are few independent replications of some of these effects at present. There is also poor information about mechanisms of radiation interactions, dosimetry issues and dose response effects. The global system of mobile communication (GSM) has public health implications. Exposures should be kept as low as reasonably achievable (ALARA).

**Key Words:** Mobile Phones, Transmitter Base Stations, RF Radiation, Radiology.



## Effect Of Artesunate on the Nissl Bodies of the Cerebellum of Wistar Rats

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### ABSTRACT

The study was to assess the effect of the administration of different of artesunate on the Nissl bodies of the cerebellum of Wistar rats. Twenty adult albino Wistar rats weighing between 160-180g were equally assigned into four groups (A, B, C and D). Group A served as the control that received distilled water, while groups B, C and D were the experimental groups. Groups B and C received 2.86mg/kg and 5.71mg/kg of artesunate respectively for three days, while group D received 2.86mg/kg of artesunate for six days. Twelve hours after the last administration the animals were sacrificed. There was reduced staining intensity of Nissl bodies in groups B, C and D compared to the control. The reduction in staining was more in groups C and D especially in the granular and Purkinje cortical layers. These results revealed that artesunate cause reduced Nissl bodies of the cerebellum of Wistar rats, and these reductions were dose and time dependent.

**Key Words:** Artesunate, Cerebellum, Nissl Bodies Wistar Rats

## Histopathological Observations of the Wound Healing Properties of Plant Exudates of *Jatropha Curcas* Linn

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### ABSTRACT

This study is aimed at evaluating the wound healing properties of latex exudates of *Jatropha curcas* Linn based on histopathological observations. The plant is widely known as a source of medicals of treatment of a variety of ailments. A total of 15 albinos wister rats of both sexes weighing between 200 and 260gms were used for this study and were divided into three groups; negative control, positive control (Beta dine (R)) and exudates of *Jatropha curcas*. All rats were incised at the flanks on both sides. After treatment, smear biopsies were taken at the hours of 12, 24, 48, 72, 96, 144 and 168 for histopathological parameters used were number of neutrophils, macrophages, lymphocytes and fibroblasts. The results showed that there was a significant increase in the numbers of inflammatory cells and fibroblasts suggestive of its ability in acceleration of wound healings.

**Key words:** *Jatropha curcas*, inflammatory cells, wound healing.

## A Study of Thumb Print Patterns and Abo Blood Group Distribution

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### ABSTRACT

The aim of this study was to establish a possible relationship between thumb print pattern and ABO blood group distribution. The study involves two hundred and nine-two volunteers comprising 159 female and 133 male. The blood group and finger print patterns were determined using standard techniques. Results obtained revealed that gender was not significantly related with ABO blood group patterns. Gender comparisons with finger print pattern also showed no significant relationship. Comparisons between ABO blood group pattern and thumb print pattern showed no significant relationship  $P > 0.05$ . The above finding indicated that these characteristics were independent of each other and may be used independently in the process of identification.

**Key Words:** Blood Group, Thumb Print, Gender.

## A Comparative Study on the Cephalic Indices of Normal Growing Children and Children with Sickle Cell Anemia in Port Harcourt.

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### ABSTRACT

A comparative study on cephalic index was carried out on 50 patients, 28 males and 32 females homozygous for sickle cell anemia, who attended the sickle cell clinic at the University of Port teaching Hospital between the age ranges of 3-18 years. The same was also done for 250 normal growing children 131 males and 199 females between ages 3-18 years who are pupils of schools within at the University of Port Harcourt as a well as first international Academy, Rumuokoro, Port Harcourt. The Head Length (Greatest anteroposterior diameter) was measured with the help of spreading caliper, from glabella to inions. The Head-breadth was measured as the maximum transverse diameter between two fixed points. The results showed a mean cephalic index value of  $79. \pm 4.3$  for the normal growing children while that for male sickle cell children was  $77.1 \pm 3.7$  which is significant ( $P < 0.05$ ). The mean cephalic index for normal female children was  $79.9 \pm 3.9$  while that for female sickle cell children was  $78.4 \pm .8$  which is statistically non significant. Thus it has been deduced that sickle cell anemia has an effect on this anthropometrics index.

**Key Words:** Cephalic, Anaemia, Measurable, Sexes.



## Morphological and Metrical Study of the Cribriform Plate of the Ethmoid Bone of Male Nigerians

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### ABSTRACT

A morphological and metrical study of the cribriform plate of the ethmoid bone was carried out on dry skulls to determine the degree of asymmetry and establish a base line data for Nigeria. Measurements were taken on the cribriform plate of 21 dry skull samples which were gotten from three different Nigerian Universities. The skulls were all male specimen of Nigerian origin within the age range of 25-30 years. The length of the cribriform plate was measured by carefully placing a pair of divider across the length of the right and left halves from apex to base. The divider was then removed and transferred to a meter rule for a reading to be taken. The width of the right and left halves of the cribriform plate was also measured across the widest area (base) of the bone. The perforations on the right and left halves of the cribriform plate were counted using the hand lens and the total number noted. The results showed that there was no significant difference ( $p > 0.05$ ) between the length and width of the right and left halves of the cribriform plate and in the mean number of perforations. The mean of the length of the right half of the cribriform plate is  $(2.66 \pm 0.05)$  cm while that of the left is  $(2.62 \pm 0.06)$  cm. the mean of the width of the right half is  $(0.64 \pm 0.02)$  cm while that of the left is  $(0.63 \pm 0.02)$  cm. the mean number of the perforations on the right is  $(32.2 \pm 1.8)$  while that of the left is  $(34.3 \pm 1.5)$ . An insignificant level of asymmetry was found in the cribriform plate which is in the form of bulging or flattening of the crista galli and the lateral borders of the plate.

**Key Words:** Cribriform Plate, Ethmoid Bone, Nigeria Male.

## Left Fronto-ethmoidal Sinusitis Complicated by A Contralateral Subdural Abscess- A Case Report

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### ABSTRACT

Subdural abscess although very rare is one of the most frequently encountered intracranial complications of sinusitis. A case of contra-lateral subdural abscess is most unusual. This paper reports the management of a 14 year old male that presented with a left frontoethmoidal sinusitis complicated by a right subdural abscess. The patient recovered fully after a left fronto-ethmoidectomy and right Burr whole drainage of subdural abscess at same anaesthetic session by the ENT and Neurosurgery team respectively. Timely intervention and the benefit of multidisciplinary approach are highlighted and the use of enhanced Computerized Tomography is sine qua non to optimal treatment.

**Key Words:** Sinusitis, Contralateral Subdural Empyema, Fronto-Ethmoidectomy, Burr hole.

## Incidence of Metopism in Adult Malawian Population.

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### ABSTRACT

Metopic suture runs from the bregma to the nasion in a definite characteristic that varies between population, gender and lifestyles. It is influenced by genetic factors hence the population variations in its incidence. The incidence of metopism in adult Malawian subjects was determined using eight hundred and thirty nine (839) anteroposterior skull X-rays of adult Malawian subjects. Complete metopism was found in 0.12% of the population with no incidence of incomplete metopism. The only male subject with complete metopism had no frontal sinuses on the skull X-ray. Furthermore, medical records did not reveal any others associated diseases or abnormalities. Our study has shown regional variability in metopism as well as the documented population and gender differences. Despite the lowest incidence recorded probably for the first time in an African sample, in X-ray diagnosis of fractures of the frontal bone, metopic suture should be considered as a possible differential.

**Key Words:** Metopic Suture, Fracture, Frontal Bone.

## VOLUME: 7 NO 2

## Pregnancy Weight Gain, Body Mass Index and Blood Pressure of Pregnant Women in Zaria, Nigeria

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### ABSTRACT

Recent reports have shown that inappropriate gestational weight gain has direct effect on both maternal health and fetal growth, and that the prevalence of higher gestational weight has been increasing. The present study was designed to examine the levels of changes in women due to pregnancy. The parameters examined include pregnancy weight, pregnancy body mass index (BMI) and blood pressure (BP). The sample included 337 women from four different hospitals in Zaria, age between 15-50 years. There was a



gradual increase in the means of the weight from week 14 ( $54.33 \pm 13.5$ ) to term ( $70.65 \pm 13.15$ ). There was a significant increase in weight and BMI ( $p < 0.001$ ) as pregnancy advances towards term, however blood pressure, pulse pressure, and mean arterial pressure did not show any significant difference. Correlation analysis indicated significant relationship between BMI, blood pressure parity and birth weight with  $p < 0.05$  and  $p < 0.001$  respectively. The study showed that pregnancy significantly increased body weight gain, BMI, but not BP.

**Key Words:** Pregnant Women, Weight Gain, Body Mass Index, Blood Pressure, Ethnic Groups, Nigerians.

## **Morphological and Metrical Study of the Articular Facets on the Calcaneus of Southern Nigerians**

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### **ABSTRACT**

The study was carried out using 60 Nigerian dry calcanei obtained from anatomy laboratories of University of Port Harcourt and Nnamdi Azikiwe University (NAU) Nnewi campus. The specimens were free of pathological changes and anomalies and the 1974 El-Eishi approach was used to estimate the morphological structure of the articular facets on the calcanei. The method involved preparation of bones using standard procedure and studying facets of calcanei to reveal different pattern types of articular facets ranging from type I to type IV. The diameters of the articular facets were also measured and divided by two to obtain values of  $r$  ( $r = \text{radii}$ ) which in turn was used to calculate the surface area of each pattern type. The readings were used to calculate the mean range. The result showed that type I has a frequency of 61.67%, type II 20.0%, type III 15.0% and type IV was 3.33%. It is obvious that type I pattern of articular facets is more common in our environment. We conclude that between the morphometric and metric methods, the morphometric gave a clear and more accurate result.

**Key Words:** Calcanei; Articular Facets, Morphometric and Metrical

## **Sexual Dimorphism in Facial Dimensions of Adult Ijaws**

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### **ABSTRACT**

Facial anthropometric parameters were determined in one thousand (1000) subjects comprising five hundred (500) males and five hundred (500) females aged 18 years and above. The subjects were randomly selected from Port Harcourt and Yenegoa in Bayelsa State and they were Ijaw by both parents. The facial parameters were measured using a sliding vernier caliper. The results obtained showed that Ijaw males had a mean facial height of  $11.87 \pm 1.59$ , nasal height  $4.71 \pm 0.63$ cm, maxillary height  $2.49 \pm 0.33$ cm, mandibular height  $4.60 \pm 0.61$ cm and oro-facial height  $7.12 \pm 0.95$ cm while mean facial dimensions for female Ijaws were facial height  $10.71 \pm 1.43$ cm, nasal height  $4.43 \pm 0.59$ cm, maxillary height  $2.39 \pm 0.32$ cm, mandibular height  $4.28 \pm 0.57$ cm and oro-facial height  $6.50 \pm 0.87$ cm. Statistical analysis using the student's Z-test showed that Ijaw males had significantly higher values than Ijaw females in all the facial parameters measured ( $p < 0.05$ ). This study has shown that as in most other populations, facial parameters are sexually dimorphic among the Ijaws. The values could be very useful as anthropometric reference values and reconstructive surgery among Ijaws in Nigeria.

**Key Words:** Facial Dimensions, Anthropometry, Ijaws. Aged 18 Years and Above. The Subjects Were Randomly Selected From Port.

## **Knee Alignment Patterns Amongst Children in Borikiri, Port Harcourt**

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### **ABSTRACT**

Knee alignment in which the mechanical axis (centre of gravity) bisects the knee when the patient is standing erect is termed normal, there are however deviations from this Genu varum and Genu valgus are the results of this mechanical axis deviation. In genu varum, the axis shifts laterally while in genu valgum, the shift is medial. The aim of this research is to determine the occurrence of various knee alignment patterns using the intercondylar and intermalleolar distance of children. A total number of 900 (450 boys 450 girls) school children ages from 2 years to 10 years were utilized in this study with a view to classifying them into normal knees, genu varum and genu valgum. The children with no demonstrable intercondylar or intermalleolar distance were 568 constituting 67%. Two hundred and sixty six (59.1%) male children had normal knee patterns while 169 (37.6%) had genu varum with a mean intercondylar distance of  $0.75 \pm 0.3$ cm, and 15 (3.3%) had genu valgum with a mean intermalleolar distance of  $3.25 \pm 1.75$ cm. three hundred and two (67.1%) of the females had normal knee alignment patterns, while 125 (27.8%) of them had genu varum with a mean intercondylar distance of  $0.6 \pm 0.2$ cm and 23 (5.1%) had genu valgum with mean intercondylar distance of  $5.5 \pm 1.7$ cm. the



differences in means in the intercondylar values was significant ( $p < 0.01$ ) while that of the intermalleolar values was insignificant ( $p > 0.05$ ). the work also showed that there are higher percentages of children with genu varum than those with genu valgum. Children with values above these figures may require careful follow-up.

**Key Words:** Genu Varum, Genu Valgum, Intermalleolar, Intercondylar, Caucasians, Alignment Patterns.

## **Structural Changes in Conjoined Birth: A Case Study of Rare Complication of Multiple Pregnancies.**

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### **ABSTRACT**

We present a case of a 25 year old multiparous woman in her fifth pregnancy. She had three previous spontaneous deliveries one spontaneous miscarriage. Abdominal ultrasound revealed she had conjoined twins at an estimated gestational age of 37.1 weeks. She was delivered through caesarian section of a set of conjoined twins, joined in entire length of thorax and abdomen (thoraco-omphagus). They died within 10 minutes of birth. Structural changes, obstetrical and gynaecological precautions associated with the case are discussed.

## **VOLUME: 8 NO 1**

### ***Ocimum Gratissimum* Linn. Reverses Cadmium-induced Toxicity of Spermatic Parameters of the Male Guinea-pig.**

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### **ABSTRACT**

The influence of the aqueous crude extracts of *Ocimum gratissimum* Linn. Leaf on cadmium (Cd)-induced toxic effects on spermatic parameters of the male guinea-pig (GP) was investigated. In  $n = 5$ , Cd (0-8mg/kg) caused a dose-dependent inhibition or reduction of various spermatogenic parameters namely-number of normal sperm cells:  $55.7 \pm 2.02 \times 10^6$  to  $7.50 \pm 1.19 \times 10^6$ /ml; number of abnormal sperm cells:  $2.25 \pm 0.25 \times 10^6$  to  $8.25 \pm 2.18 \times 10^6$ /ml and total sperm count:  $58.00 \pm 1.96 \times 10^6$  to  $15.75 \pm 2.63 \times 10^6$ /ml; motility:  $64.25 \pm 2.39\%$  to  $26.50 \pm 1.71\%$ ; morphology:  $5.75 \pm 0.75\%$  to  $38.25 \pm 2.72\%$ ; and significant increase ( $p < 0.05$ ) in particulate and primordial sperm cell counts in the male GP. However, injection of *Ocimum gratissimum* Linn. Extract after Cd administration had little or no significant effect on the above mentioned parameters. Pretreatment with 5mg of *O. gratissimum*, with subsequent administration of cadmium, blocked or reversed the Cd-induced toxicities on the various spermatogenic parameters-motility:  $26.50 \pm 1.71\%$  to  $53.25 \pm 2.14\%$ ; morphology:  $38.25 \pm 2.72\%$  to  $8.75 \pm 1.25\%$ ; number of normal sperm cells:  $7.50 \pm 1.19 \times 10^6$  to  $27.25 \pm 1.60 \times 10^6$ /ml; number of abnormal sperm cells:  $8.25 \pm 2.18 \times 10^6$  to  $5.25 \pm 0.63 \times 10^6$ /ml and total sperm count:  $15.75 \pm 2.63 \times 10^6$  to  $32.50 \pm 1.85 \times 10^6$ /ml. the observed influence of *O. gratissimum* on Cd-induced toxicity may be the consequence of the antioxidant action of the plant extract on the spermatogenic apparatus of the organism.

**Key Words:** Spermatic Parameters, *Ocimum Gratissimum* Leaf, Cadmium, Pretreatment

### ***Ocimum Gratissimum* Linn. and Testicular Structure of the Male Guinea-Pig**

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### **ABSTRACT**

The effects of the aqueous crude extracts of *Ocimum gratissimum* Linn. Leaf and cadmium (Cd) on basal serum phosphatase levels of the male guinea-pig were investigated. Furthermore, the effects of the aqueous crude extract *Ocimum gratissimum* Linn. Leaf and Vitamin C on Cd-induced toxicity of the testicular/sperm cell structure of the male guinea-pig (GP) were also investigated. *Ocimum gratissimum* (0-160mg) caused a significant inhibition/decrease ( $p < 0.05$ ) in basal serum phosphatase levels of the male guinea-pig. In contrast, cadmium (0.5-8mg/kg) caused a significant stimulation/increase ( $p < 0.05$ ) in basal serum phosphatase levels, which was positively correlated with a dose-dependent destruction of the testes and sperm cell histology/structure. Pretreatments with 5mg of *O. gratissimum* and 1.25mg/kg of vitamin C, with subsequent administration of cadmium, blocked/reversed the Cd-induced toxicities of the testes/sperm cell histology. These results may be explained in terms of the antioxidative properties and the post-receptor biochemical and molecular (transduction) events of *O. gratissimum* on Cd-induced responses.

**Key Words:** Histology; Sperm Cell; *Ocimum Gratissimum* Leaf, Testes.



## Effects of Chronic Administration of Efavirenz on the Body and Brain Weights of Adult Wistar Rats

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### ABSTRACT

The effects of chronic administration of Efavirenz commonly used as part of highly active antiretroviral therapy (HAART) for the treatment of Human Immunodeficiency Virus (HIV) type-1 on the body and brain weights of adult wistar rats were carefully studied. The rats of both sexes ( $n = 16$ ), with the average weight of 200g were randomly assigned into treatment ( $n = 8$ ) and control ( $n = 8$ ) groups. The rats in the treatment group received 8.57mg/kg body weight of Efavirenz dissolved in distilled water daily for 30 days (thirty days) through the orogastric tube. The control group received equal volume of distilled water daily for 30 days through the same route. The rats were fed with grower's mash obtained from Edo feeds and Flour Mill Limited, Ewu, Edo state, Nigeria and given water liberally. The rats were sacrificed by cervical dislocation method on the thirty-first day of the experiment. The brains were carefully dissected out, dried and weighed using the Mettler Toledo weighing balance. The body weights were taken before and during the period of treatment using the weighing balance. The findings indicate that there was a steady increase in the body weight during the period of acclimatization and before the treatment. During treatment, the control animals continues to increase in body weight, while that of the treatment group showed decrease in body weight that was statistically significant ( $P < 0.05$ ) when compared with the control group. There was also a significant decrease ( $P < 0.05$ ) in the dry brain weight and significant increase ( $P < 0.05$ ) in the relative dry brain weight of the treated group as compared to the control group in this experiment.

**Key Words:** Effects, Efavirenz, Body Weight, Brain Weight, Wistar Rats.

## Anthropometry of the Pituitary Fossa in Normal Adult Ijaws of the Niger Delta in Nigeria

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### ABSTRACT

The pituitary fossa (Sella Turcica) has been studied by various workers in different populations and racial and regional variations of the normal sella noted. This study therefore was carried out to determine the radiological dimensions of the pituitary fossa in normal adult of the Ijaws of the Niger Delta region of Nigeria. A total of 440 normal radiographs of the lateral view of the skull comprising 220 males and 220 females were utilized. The radiographs were obtained randomly from the Radiology Department of the University of Port Harcourt Teaching Hospital, the Braithwaite Memorial Specialist Hospital and Kaliya Specialist Diagnostics all in Port Harcourt Nigeria. The mean length of the sella was found to be  $10.8 \pm 1.7$ mm while the mean depth was  $8.2 \pm 1.6$ mm. The males had greater sella sizes than the females though not significant ( $P > 0.05$ ). The sella size of the Ijaws when compared to the Caucasian values was larger though the difference was also not significant ( $P > 0.05$ ). This finding will be useful as a reference guide for the sella of the Ijaw population in.

**Key Words:** Pituitary Fossa (Sella Turcica), Ijaws Niger Delta, Radiographs.

## Incidence of Unusual Sacralization and Lumbarization in Southern Adult Nigerian Population

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### ABSTRACT

A study on the incidence of unusual sacralization in adult Nigerians was carried out, using sacral bones and radiographs of lumbosacral vertebrae. The bones were obtained from three Nigerian Universities which are: University of Port Harcourt, Nnamdi Azikiwe University and University of Nigeria, Enugu Campus. The radiographs were gotten from: University of Port Harcourt Teaching Hospital, Braithwaite Memorial Specialist Hospital and Seiyeta Clinic, Port Harcourt. Thirty (30) available sacra were taken and observed to note the number of sacralization and lumbarization in male and female bones. Randomly selected lumbosacral radiographs of patients were collected from Radiology Department of the three Hospitals in a two year period (2006-2007). The X-ray reports were noted and observed. Results revealed that sacralization in males was higher (62.5%) than in females (37.5%) and generally the ratio of sacralization is twice in percentage to lumbarization. Therefore, it is apparent that the condition of sacralization is real; however it is a rare condition that can only be seen through radiograph and does not affect normal life expectancy.

**Key Words:** Unusual Sacralization, Adult Nigerian Population, Lumbosacral.



## **Variations and Incidence of Agenesis of the Pyramidalis Muscles in Nigerian Males.**

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### **ABSTRACT**

In recognition of the variations in occurrence, shape and size of the pyramidalis muscle in different races, sexes and nationals and its relevance in flap and graft, this study was carried out to determine the incidence of its agenesis, variation in occurrence, shape and values of length and breadth in Nigerian males. A total of 24 male cadavers from the Anatomy Laboratories of different Nigerian Universities were used in this study. Dissection of the lower anterolateral abdominal wall was made to ascertain the presence, shape and size of the muscle. Agenesis occurred in 8.33% of the subjects studied. There was no case of unilateral occurrence or supernumerary presence and the predominant shape was triangular with no difference in shape on either side. The mean values of the length and the breadth for the right pyramidalis muscle were 8.09 0.70 and 1.55 0.28, while the mean values of 7.94 1.71 and 1.60.30 were recorded for the left. These differences were found not to be statistically significant ( $P>0.05$ ). Our findings suggest that the incidences in the sizes of the muscle on either size.

**Key Words:** Pyramidalis Muscle, Variations, Incidence.

## **Effects of A Diet Containing Garcinia Kola Seeds on the Liver of Adult Male Wistar Rats**

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### **ABSTRACT**

This study aims at investigating the in vivo effect of Garcinia kola (G kola) seeds on the histology, and glycogen storage action of the liver of adult male albino wistar rats. Forty (40) adult male albino wistar rats were used in this study. They were procured from the Animal House of the Faculty of Pharmaceutical Sciences, University of Nigeria Nsukka. They were acclimated to the conditions of the Animal House of the College of Medicine, University of Nigeria Teaching Hospital, Enugu. They were divided into four (4) groups of ten (10) each. Groups I, II, and III were growers mash mixed with G. kola powder at 30%, 20% and 10% w/w respectively. Group IV (control) was fed ad libitum with normal diet of growers mash produced by Top Feeds<sup>®</sup> Plc. The experiment lasted for ten (10) weeks. At the end of the experimental period, the animals were euthanised by chloroform inhalation and their liver dissected out and processed for H&E, and Best Carmine stains. The cell morphology of the hepatocytes was not deranged due to consumption of Gkola seed. The Best Carmine stained slides showed a dose dependent increase in the glycogen storage activity of the liver. The implications of these changes are discussed.

**Key words:** G.kola, biflavonoids, liver, glycogen.

## **Stature Prediction from Foot Length in A Nigerian Population**

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### **ABSTRACT**

This study is aimed at establishing the reliability of estimating stature from foot length measurement in a Nigerian population. Two hundred and sixty-two healthy medical students of Imo State University Owerri, Nigeria were used for the study. The study yielded positive correlation coefficients of 0.698 and 0.70 for males and females respectively. The coefficient of determination was also positive. The regression formulae were  $Y = 4.145 + 0.133X$  for males and  $Y = 5/171 + 0.123X$  for females (where Y = foot length, X + height). Sexual dimorphism was observed whereby the foot length of the female was smaller than the male foot length for the same height.

**Key Words:** Height, Foot Length Sexual Dimorphism



## **Determination of Commencement of Gestation From the Vaginal Cytology in the Wistar Rats**

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### **ABSTRACT**

The process of confirmation of pregnancy and commencement of gestational dating in the laboratory animals is a fundamental and vital procedural step particularly necessary in the course of reproductive or developmental research; but most of the commonly employed methods for this exercise had been proving vague and disappointing both to the young and the experienced researchers. The changes in the vaginal epithelia cytology during the estrus cycle appear to be more accurate approach to monitor the ovarian activities, and hence, more reliable, and this is presented here and discussed.

**Key Words:** Vaginal Cytology, Estrus Cycle, Gestation, Rats

## **Unusual Formation of the Median Nerve at the Level of the Distal Half of the Arm**

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### **ABSTRACT**

Median nerve is one of the terminal branches of the brachial plexus associated with several variations most of which are reported in the literature. Some of these variations include abnormal communications with other nerves such as musculocutaneous and ulnar nerves, splitting of the nerve, penetration of the nerve by other vessels such as brachial artery, variations with the areas of innervation of the nerve and also with the number roots forming this nerve. This study reported the formation of the median nerve at an unusually low level in the arm. This unusual level of formation was compared with standard course of this nerve as described in the anatomic literature and atlases.

**Key Words:** Median Nerve, Arm, Unusual Formation

## **Coparative Ovulation in Clariidae Using Crude HCG From Early Pregnancy Urine**

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### **ABSTRACT**

Members of Clariidae do not spawn in captivity. Culture of these species in captivity must necessitate induce spawning of the eggs. Synthetic hormones have been known to assist this process. This paper used purified crude HCG from early pregnancy urine to assay ovulation in three species of Clariidae. Purification and extraction of crude HCG was carried out by the techniques involving alcohol precipitation, ion exchange chromatography and gel filtration. Biological activity of the purified homogenate was tested on three species of clariidae: *Heterotranchus longifilis*, *clarias gariepinus* and *clarias anguillaris* at a dose 2.5i.u/gram body weight. Eggs were stripped from fish after a latency period of 12-20hours. *H. longifilis* gave the highest number (percentage) of stripped eggs and showed significant difference with clutch size (P<0.05) when compared with *C. gariepinus* and *C. anguillaris*. No significant difference (P>0.05) was observed in fecundity between the two *Clarias* species. However all the three species showed high fecundity when treated with the homogenate. The results show positive implications for the culture of the species in captivity.

**Key Words:** Ovulation, Clariidae, HCG.

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## **Embryology in the Nigerian Medical Curricula: Present Realities, Future Challenges.**

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### **ABSTRACT**

An urgent need to bring medical education and curriculum planning issues to the fore in Nigeria has been expressed severally given the inadequacies of the current traditional approach to medical education in Nigeria. This study examined the status of Human embryology in the curricula of Nigerian medical schools, highlighting issues with immediate and long term implications. A descriptive cross-sectional self administered questionnaire was distributed among Heads of Anatomy Departments and Embryology faculties who attended the 4<sup>th</sup> Annual Conference of the Anatomical society of Nigeria at Delta State University, Abraka, and Delta State. The returned questionnaires were then analyzed. Our findings were that the pedagogical approach still



persists in the teaching of embryology, with the course anchored essentially by Junior Cadre faculty. Readily available cost effective audiovisual aids were not optimized in teaching the course. Sampled schools were not conducting any form of curriculum review involving embryology as at the time of the study. It appears anatomy teachers in our medical schools are yet to recognize the enormous changes that have taken place globally over the last decade in the way human embryology is taught.

**Key Words:** Embryology, Medical Curricula, Nigerian Universities.

## **Ancient Embalming Techniques Amongst the Ogoni Tribe in Southern Nigeria**

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### **ABSTRACT**

Embalming is the art and science of temporary preserving human remains to forestall decomposition. It was first practiced by the ancient Egyptians dating back to 4000BC. This research was carried out to study the traditional method of embalming by the Ogonis, a tribe in the Southern part of Nigeria. A total of 140 elders from the various communities in Ogoni land were used for this study. It was done by oral interview because the elders who knew about the tradition were illiterates and no written document was available. The results showed that the ancient people of Ogoni predominantly used large quantities of alcohol concentrate (dry gin), potash, herbal leaf (*Ocimum gratissimum*) and kernel oil. The reasons for embalming were to have enough time for burial rites, giving the dead last respect and to transport the dead to their ancestral home. The preservation could only last for 2 to 3 days. Findings were compared with ancient embalming techniques of other people such as Egyptians, the Greeks and others.

**Key Words:** Ogoni, Embalming, Alcohol, Burial Rites.

## **Morphologic Changes in the Utero-ovarian Tissues of the Offspring of Rats Exposed to Aqueous Extract of *Hibiscus Sabdariffa* During Lactation**

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### **ABSTRACT**

*Zobo*, a sweetened aqueous extract of *Hibiscus sabdariffa* (HS), is commonly produced and consumed by Nigerians of all ages irrespective of gender and physiologic state as a substitute for carbonated drinks or fruit juices. In this study, we intended to investigate the morphologic changes induced by HS on the utero-ovarian tissues of offspring of Sprague-Dawley (SD) rats whose mothers drank HS during lactation. Eighteen pregnant rats were used for this study. These rats were given ad libitum food and water throughout pregnancy. On the day of delivery the rats were randomly divided into three groups of six animals each: Group A continued with the tap water (control) while groups B and C received 0.6g/100ml and 1.8g/100ml aqueous extract of HS respectively as their drinking fluid throughout 21 days postpartum. Results show that the pups of the HS dams had delayed onset of puberty and heavier uteri and ovaries compared with the control. The HS pups also had fewer mature follicles in the ovary and diffuse infiltrates of eosinophils in the endometrium. It was concluded that HS had estrogenic effects on the uterus and inhibitory effects on growth of follicles in the ovaries.

**Key Words:** *Hibiscus Sabdariffa*, Morphologic Changes, Endometrium, Ovarian Tissue, Lactations, Sprague-Dawley Rats.

## **Effects of Mercury Chloride on the Cerebral Cortex of Adult Wistar Rats**

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### **ABSTRACT**

Mercury is among the heavy metals that have been reported to cause devastating health problem worldwide. The primary site of action of mercury chloride is the central nervous system. This study investigated the effect of mercury chloride on the cerebral cortex of adult wistar rats. Twenty-four (24) adult wistar rats were used for this study. Following four (4) weeks of acclimatization, the rats were randomly divided into five groups of five animals per group. The animals were allowed free access to food and water throughout the period of experiment. Group 1 was the control group and was administered distilled water, while groups 2, 3, 4 and 5 were administered 6.6mg/kg, 13.2mg/kg, 26.3mg/kg and 52.2mg/kg body weight of mercury chloride solution orally respectively for eight (8) days. After the period of mercury chloride administration, the animals were anaesthetized using chloroform and were sacrificed. The brain was fixed in Bouin's fluid and the tissues processed and stained with haematoxylin and eosin stains and were studied under the microscope. The photomicrographs reveal distortion and diffusion of cells and a widespread necrosis of the cortical neurons.

**Key words:** Mercury Chloride, Cerebral Cortex, Degenerative Changes



## **A Cadaveric Study of the Morphometry of the Cervical Spinal Canal in Nigerians**

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### **ABSTRACT**

Morphometry of the cervical spinal canal is of clinical importance in traumatic, degenerative and inflammatory conditions. A small canal diameter has been associated with an increase of injury mainly in athletes who participate in contact or collision sports. Before abnormal spinal morphometry can be determined, it is first necessary to establish normal values for the specific patient population being evaluated. The author's study of 105 anatomical specimen of the cervical spine (70 males, 35 females) was to determine the spectrum of the sagittal diameter of the cervical spinal canal in Nigerians. Normal spinal canal mean for C3 was 17.82mm, C4 17.14mm; C5 17.35mm; C6 17.35mm; and 17.42mm in C7 for male specimen while for female specimen was C3 17.45mm, C4 16.40mm; C5 17.21mm, C6 17.13mm and C7 17.38mm. The mean canal-body ratio was 0.82 and 0.91 for males and females respectively. The finding offer valuable information for a symptomatic cervical spinal stenosis and also highlights the importance of normative data of the cervical spinal canal for the population under study.

**Key words:** Morphometry, Cervical Spinal Canal, Nigerians.

## **Patterns of Handedness and Socio-Cultural Influences on Dextrality Amongst University of Nigeria Medical Students**

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### **ABSTRACT**

There are three types of handedness with different prevalence rates reported from various parts of the world including Nigeria. The aim of the study was to establish the prevalence of handedness using the students of the College of Medicine, University of Nigeria Enugu Campus as the study group. A modified Edinburgh inventory was applied to 1200 students. Of the questionnaires returned, only those that were correctly filled, were analyzed. Of the 1200 questionnaires, 880 (73.33%) were analyzed. Three hundred and seventy six (42.7%) were females and 504 (57.3%) males. The ages of the subjects ranged from 18 to 28 with a mean age of 22.13 (+ 2.236) years. Eight hundred and twenty nine (94.2%) of the respondents were Igbos and 99.5% Christians. Overall 3.94% were left handed, 8.43% mixed handed and 87.63% were right handed. More males were left handed than females. More than 10% of the respondents were forced to switch from left hand to right hand in their formative years. A higher percentage of females were affected by the forced hand switch, and the success rate was higher with females. The prevalence of left handedness compared favourably with reports from Nigeria, and other African and European countries. Forced hand switch or forced dextrality probably plays a significant role in keeping the prevalence of left handedness low in our country, and may be partly responsible for the higher prevalence of left handedness in males than in females.

**Key words:** Handedness, Patterns, Medical Students, Nigeria.

## **Comparative Testicular Histopathological Effects of Artemisinin Derivatives and Some Acts in the Guinea-pig**

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### **ABSTRACT**

Artesunate and dihydroartemisinin are artemisinin derivatives, which are effective antimalarial agents used in the treatment of malaria. Combination of artemisinins and other standard antimalarial drugs (ACTs) have resulted in better cure rates of *Plasmodium* infections. In this study, the histopathological effects of half, normal and double clinical doses of artesunate, dihydroartemisinin, artesunate/amodiaquine, artesunate/sulfadoxine/pyrimethamine and artemether/lumefantrine on the testes of guinea-pigs were investigated. Mean testicular weight and circumference were both significantly ( $p < 0.05$ ) decreased dose-dependently by artesunate/amodiaquine and artemether/lumefantrine, while the other agents decreased only testicular circumference without significant effects on the weight. Furthermore, artesunate and dihydroartemisinin caused dose-dependent distortions of the testicular architecture/histology, characterized by interstitial edema, poor sperm cell differentiation, moderate maturation arrest and impairment of spermatogenesis. The ACTs also caused general inflammation of the testes, with different degrees of edema and depressed sperm production. The clinical dose of artesunate/amodiaquine caused poor differentiation of sperm cells and damage of the seminiferous epithelium. In addition, the half clinical dose of artemether/lumefantrine caused poor development of germ cells, marked maturation arrest and reduced sperm production. There was also marked eosinophilia of the cytoplasm of the spermatocytes, shrinking of the nuclei of the spermatocytes and early signs of necrosis. The results obtained in this study may be due to oxidative damage on the testicular cell/tissues by the antimalarial agents, especially on the leydig and sertoli cells of the testis.

**Key words:** Artemisinin, ACT, Sertoli, Spermatogenesis, Histopathology.



## **Accessory Transversarium Foramen of Cervical Vertebrae: A Case Study.**

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### **ABSTRACT**

The anatomical variations of the cervical vertebrae as reported in most classical anatomical textbooks mainly include: cervical ribs, non fusion of the halves of the posterior arch of atlas, presence of articular facets on the superior margin of the anterior arch of the atlas in case of presence of a third occipital condyle. A male cadaver preserved by means of the routine embalming techniques following the completion of dissection was used for bone maceration. The soft tissues were removed and the cervical vertebrae were studied for variations. The variations recorded in this study include the presence of accessory transverse foramina in the atlas, C5 and C6, the presence of an accessory foramen transversarium in the cervical vertebra is a rare variation. It narrowed the size of the real transverse process and this may result in pressure on the vertebral artery and the sympathetic plexus embedding it. Similarly the narrowing of the transverse foramen may result in formation of atheromatose plaque which may also result to thrombosis emboli or just reflex spasm. The implications of these variations in the anatomy of this region should be noted by neurologist and by those who advocate instrumentation of the cervical vertebrae.

**Key words:** Cervical Vertebra, Atlas, Accessory Transverse Foramina, Foramen Transversarium.

## **The Common Brachiocephalic Trunk In Cadaveric Studies In Nigeria**

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Normally the brachiocephalic trunk arises from the convexity of the arch of the aorta and terminates by given two branches, the right subclavian and right common carotid arteries. The left common carotid and left subclavian arteries arise as separate branches from the aortic arch. Variations in this arrangement including a common brachiocephalic trunk have been reported in literature outside Africa. Studies from the African continent are still scanty. Some of these variations are associated with other congenital cardiac malformations and of clinical significance. This report documented the observation from 50 cadavers dissected during the period between 2004 to 2009. In one cadaver, only two vessels were seen to originate from the arch of the aorta. The first big trunk gave off the left common carotid artery 1.3 cm from the arch and then divided after another 1.7 cm into two, right common carotid and right subclavian arteries. The vessel was therefore named the common brachiocephalic trunk. The other branch from the arch was the left subclavian artery. The common brachiocephalic trunk is present in 2% of adult Nigerian cadavers.

**Key words:** Common brachiocephalic trunk, Arch of the aorta, Cadaver, vascular malformations, congenital heart defects.

## **Effect of Humulin (Insulin) on the Pancreas of Streptozotocin Induced Diabetic Wistar Rats.**

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### **ABSTRACT**

Several substances including orthodox pharmacological agents and traditional herbs have been employed in the management of diabetes. In this study the effect of humulin (insulin) on the pancreas of streptozotocin induced diabetic wistar rats was investigated. Twenty-four (24) albino rats were divided equally into 3 groups A (Normal control), B (Diabetic control), and C (Diabetic rats treated with Humulin). Diabetes was induced with streptozotocin. Humulin was administered subcutaneously daily at a dosage of 5iu/kgbw to rats in group C while Groups A and B rats received placebo for 28 days. At the end of the experiment the animals were sacrificed under chloroform vapour. The pancreas was collected for histological studies and serum for blood glucose assay. Results showed a significant weight loss ( $p < 0.05$ ) among group B animals and a significant weight gain ( $p < 0.05$ ) in the group C animals compared to the normal control group. Also the glucose levels of the group B animals was significantly higher ( $p < 0.05$ ) than group A while that of group C was significantly reduced ( $p < 0.05$ ) compared to group B. Histologically, the pancreatic islets of group B animals was distorted with shrunken cell mass which appeared degenerated as against that of group A animal where there were prominent islet cells with a normal exocrine pancreas. In rats treated with Humulin, there was no observable difference in the cytoarchitecture of the pancreatic islet compared to the diabetic control group.

**Key word:** Diabetes, insulin (Humulin), pancreas, wistar rats.



## **A Study of the Anthropometry of the Radiographic Lumbar**

Pedicles of Nigerians in Niger-Delta Region

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### **ABSTRACT**

The Lumbar Pedicles play an important role in the transmission of weight in the Lumbar spine. They are useful in the study of the spine especially in the radiological diagnosis of a mass lesion of the spine and in the assessment of pedicle screw size and position. 500 normal anterior-posterior radiographs of adult Nigerians of the Niger Delta region were studied. The width and height of each pedicle were measured. The mean height was least at L<sub>1</sub> in the males and L<sub>4</sub> in the females and highest at L<sub>5</sub> in both genders. There was a progressive increase in width from L<sub>1</sub>, the least to L<sub>5</sub>, the widest in both genders. The males in general tended to have larger pedicles than the females but the differences were not statistically significant ( $P > 0.05$ ). The knowledge of these parameters is invaluable to the orthopedic surgeons and the radiologists.

**Key words:** Lumbar Pedicles, height, width, radiographs Niger Delta region.

## **Stature Proportionality: Comparison of Upper Segment-To-Lower Segment Ratio Among Different Age Groups In Urhobos of Nigeria.**

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### **ABSTRACT**

This anthropometric study was to assess stature proportionality of Urhobos in Nigeria. It was aimed at comparing the body proportion among children, adolescents and adults, establishing if sex and age a major role in the body proportionality of an individual. 360 subjects, 120 each of different age groups, 60 males and 60 females [children 3-10 years), adolescents (11-18 years) and adults (19-35 years)] were studied in order to compare their upper-to-lower segment (US/LS) ratios. The result of the study showed that in the average, the US/LS ratio and upper trunk of males are higher than those of females for each age grade while the lower extremities of females between ages 3-18 years are higher than their male counterparts but lower than their male counterparts between ages 19-35 years. Hence, it was found that age sex plays a major role in stature estimation of an individual.

## **The Mandibular and Maxillary Canine Teeth in Gender Determination in a Nigerian Population.**

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### **ABSTRACT**

Teeth are excellent material in living and non-living populations for anthropological, genetic, odontologic and forensic investigations. Their durability in the face of fire and bacterial decomposition makes them useful for identification. This study tends to compare the usefulness of maxillary and mandibular canine teeth in gender determination in a Nigerian population. The study subjects were 60 males and 60 females from Niger Delta, Nigeria, in the age group 17-25 years. Maxillary and Mandibular impressions for all subjects were taken in alginate impression material and study models were prepared immediately in dental stone. 50 (males) and 51 (females) maxillary models; and 53 (males) and 51 (females) mandibular models were used for the study. In the mandible, the mean inter-canine distance and the right and left mesio-distal crown width as well as mandibular canine index, when compared for males and females showed statistically significant differences ( $P < 0.05$ ) In the maxilla, only the inter-canine distance and the left mesio-distal crown width exhibited statistically significant differences. The ability to determine gender using the mandibular canine showed a greater degree of sexual dimorphism but was poor using maxillary canine.

**Key words:** Mandible, Maxilla, Canine, Gender determination



## Neurotoxicity of Mercury Chloride Administration On the Cerebellar Cortex of Adult Wistar Rats.

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### ABSTRACT

This study was carried out to investigate the effect of mercury II chloride on the cerebellar cortex of adult wistar rats, average weight of 220g were divided into groups of 5 rats per group. Group 1- served as control group and was administered distilled water orally for two weeks. Groups 2, 3, 4 and 5 were administered orally with 6.5mg, 13mg, 26mg and 52mg per kg Body weight of mercury II chloride respectively for two weeks. All the groups were given standard feed and water *ad libitum* and were housed in plastic cages. After oral administration, the animals were sacrificed and the cerebellum was fixed in Bouin's fluid and the tissue was processed histologically and stained with H & E stains. Photomicrographs were taken and the slides were examined under the low power microscope. The result shows that there was decrease in physical activities in the treated groups and degeneration of the cells of the molecular and purkinje layers of the cerebellum. Our study showed that mercury II chloride could cause cerebellar neuronal degeneration.

**Key words:** Mercury II Chloride, Cerebellar cortex, degeneration.

## Hepatoprotective Effect Of The Crude Leaf Extracts Of *Portulaca Oleracea* In Carbon Tetrachloride Induced Liver Injury In Rodents.

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### ABSTRACT

The hepatoprotective activity of *Portulaca oleracea* Linn against carbon tetrachloride (CCl<sub>4</sub>) induced liver injury in rat was investigated. Thirty (30) adult male albino wistar rats were used for the study. The rats were divided into six (6) groups (A-F) of five (5) animals each. Groups A-D received two graded doses of the aqueous extract of *Portulaca oleracea* (AEPO) and methanol extract of *Portulaca oleracea* by the oral route for seven days prior to CCl<sub>4</sub> injection. Group 'E' served as the CCl<sub>4</sub> (positive) control while Group 'F' served as baseline (normal) control group and received only distilled water. Blood was collected from all the animals for liver marker enzyme, albumin and total protein determination 24hrs post CCl<sub>4</sub> injection. Histopathological assessment of liver was done. Result showed significant alterations in the levels of biochemical markers of hepatic damage like ALT, ALP, AST, and albumin in positive control group when compared with the baseline control group ( $p < 0.001$ ). However, treatment with both extracts of *Portulaca oleracea* (400 mg/kg and 800 mg/kg) significantly protected rats from injury as evident by marked reduction in liver marker enzymes and restoration of albumin levels in a dose-dependent manner ( $p < 0.01$ ,  $p < 0.001$ ). Histopathological evaluation showed that the 800mg/kg dose of AEPO protected rats from CCl<sub>4</sub> induced hepatotoxicity as evidence by moderate changes in liver histoarchitecture. The CCl<sub>4</sub>-control group showed presence of vacuolation of hepatocytes and necrosis of cells. *Portulaca oleracea* extracts possess hepatoprotective potency.

**KEY WORDS:** *P. oleracea*, Hepatoprotection, Carbon tetrachloride, Rats, Aqueous and Methanol extracts

## Effects of Nutmeg Consumption on the Open Field Locomotor Activities in Adult Wistar Rats.

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### ABSTRACT

Effects of Nutmeg consumption commonly used as a spice in various dishes, as components of teas and soft drinks or mixed in milk and alcohol on the locomotor activities of adult wistar rats was carefully studied. The rats of both sexes ( $n = 24$ ), with average weight of 200g were randomly assigned into two groups - Treatment (A & B) ( $n=16$ ) and Control (c) ( $n=8$ ) groups. The rats in the treatment groups (A & B) received 1g and 2g of nutmeg thoroughly mixed with the feeds respectively on a daily basis. The control group (c) received equal amount of feeds daily without nutmeg added for thirty two days. The growers mash feeds was obtained from Edo Feeds and Flour Mill Limited, Ewu, Edo state, Nigeria and the rats given water liberally. Rats were taken from their home cages and placed randomly into one of the four corners of the open field apparatus facing the center and allowed to explore the apparatus for five minutes as the various behavioral scores were measured and subject statistically using the paired sample T-Test and Symmetric Measured Test of the Statistical Package for Social Sciences (SPSS). The findings indicate that there was a steady significant difference ( $p < 0.05$ ) in the behaviours of line crossing and walling. There was no much significant changes ( $P < 0.05$ ) in the behaviours of hinding, grooming and defecation between the Treatments and Control groups of animals.

**Keywords:** Nutmeg, Wistar rats, Open field, Locomotor activities



## Renoprotective Effects Of Orally Administered Aqueous Extract Of *Tridax Procumbens* On Gentamicin Induced Nephrotoxicity In Albino Wistar Rats

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### ABSTRACT

The renoprotective effects of orally administered aqueous extract of *Tridax procumbens* was investigated in Wistar rats of mixed sexes, aged between 2 to 4 months. The animals were divided into five groups of four animals each according to body weights. Group I received water only (baseline control), groups II to V received subcutaneous gentamicin (80mg/kg body weight) for eight days and on day 4 groups III, IV, and V received vitamin C (500mg/kg body wt.), 200mg/kg and 400mg/kg body wt of *T. procumbens* extract respectively, 30 minutes prior to the subcutaneous injection of gentamicin (80mg/kg body wt.). On Day 9 of the study, blood samples were collected from all the animals and serum urea and creatinine levels estimated; the animals were then sacrificed and the kidneys harvested and processed for histological examination. Results of the biochemical analysis revealed that aqueous extract of *T. procumbens* at a dose of 400mg/kg body wt. caused a significant reduction in serum urea and creatinine levels ( $p < 0.05$ ) when compared with the negative control group. Histological examination also revealed that the extract was able to protect the kidneys of the rats against kidney injury induced by gentamicin. The aqueous extract of *Tridax procumbens* shows promise as an adjuvant therapy along side with aminoglycosides as it is able to protect the kidney against gentamicin induced nephrotoxicity.

**KEY WORDS:** *T. procumbens*, Aqueous extract, Renoprotection, Gentamicin, Rats

## Histological Effects of Chronic Administration of Aqueous Extract of *Phyllanthus amarus* on the Medial Geniculate Body of Adult Wistar Rats.

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### ABSTRACT

Effects of chronic administration of *Phyllanthus amarus* commonly used for the treatment of jaundice, diarrhea, dysentery, urogenital disease and wound on the medial geniculate body of adult wistar rats was carefully studied. Rats of both sexes ( $n = 24$ ), with average weight of 200g were randomly assigned into two treatment groups (A and B) and control group (C) of 8 rats each. The rats in the treatment groups (A and B) received 400mg and 800mg of aqueous extract of *Phyllanthus amarus* per kg body weight respectively through orogastric tube administration daily for thirty days. The control group received equal volume of distilled water daily for thirty days through the same route. The rats were fed with growers mash obtained from Edo Feeds and Flour mill Limited, Ewu, Edo State, Nigeria and given water liberally. The rats were sacrificed by cervical dislocation on the thirty-one days of the experiment. The medial geniculate body was carefully dissected out and quickly fixed in 10% formal saline for further routine histological study. The findings indicated that rats in the treated groups (A&B) showed some necrotic and cellular degenerative changes such as sparse cellular population, hypertrophy, and vacuolations in the stroma of the medial geniculate body as compared to the control group with that of group B more marked. Chronic administration of *Phyllanthus amarus* may therefore have an adverse effect on the auditory sensibilities by affecting the microanatomy of the medial geniculate body of adult wistar rats.

**Keywords:** Histological Effects, *Phyllanthus amarus*, Medial Geniculate Body, Wistar rats.

## Amlodipine Besylate Is Testes Friendly

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### ABSTRACT

Amlodipine besylate is a relatively new antihypertensive drug with potential as a choice chemotherapy in future. Commonly prescribed as a single oral dose, it can be used in all forms of elevated blood pressure and has a high cure rate. Eleven (11) male Wistar rats of 250g average body weight were used to determine the effect of Amlodipine besylate on the testes. Three dose levels (0.5, 1.0 and 10mg/kg) were used. The rats were all sacrificed on the eighth day following treatment and the testes examined morphologically and histologically after fixing with 10% formaldehyde. The results obtained revealed active seminiferous tubules where the processes of spermatogenesis and spermiogenesis were seen occurring. This study strongly suggests that there was no toxicological effect on the testes even at dose level as high as 10mg/kg. It could be deduced that Amlodipine besylate is a very safe drug which is highly recommended.

**Key words:** Hypertension, Amlodipine besylate, Testes, Spermatogenesis, Spermiogenesis



## **Radiological Assessment of the Interorbital Distance In Nigerian Children**

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### **ABSTRACT**

Inter orbital distance is an important tool in craniofacial anthropometry. It is useful in making a diagnosis of hyper or hypotelorism. A total of 70 plain radiographs of Nigerian children were used for this study. The interorbital distance was measured using standard measurement procedure. The results revealed mean value of  $19.59\text{mm} \pm 5.59$  for age group 1 day to 5 years,  $23.74\text{mm} \pm 4.15$  for age group 6 years to 10 years and  $28.22$  for age group 11 to 15 years. The distance interval range was  $17.63-21.55\text{mm}$ ,  $21.96-25.52\text{mm}$  and  $26.29-30.15\text{mm}$  as against  $12.20-18.60\text{mm}$ ,  $17.00-23.00\text{mm}$  and  $22.50-28.00$  of the Caucasian values for age groups 1 day to 5 yrs, 6 yrs to 10 yrs and 11-15 yrs respectively. The difference was statistically significant for all age groups ( $P > 0.05$ ). This value will be useful in the medical practice most especially in craniofacial surgery.

**Key words:** interorbital distance, measurement, Nigerian.

## **The Effect of Glucocorticoid (Dexamethasone) Administration on the Postnatal Development of the Hippocampus and Growth of the Wistar Rat**

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### **ABSTRACT**

Synthetic Glucocorticoids are commonly administered to early low birth weight infants to prevent the onset of chronic lung disease. During this period, the brain is undergoing significant structural and functional changes and is vulnerable to external influences. This study observed the effect of early administration of glucocorticoids on the developing hippocampus. Wistar rat pups were grouped into ten groups of six pups each. Five of the groups made up the control, the remaining five were the treatment groups.  $0.5\text{mg/kg}$  of dexamethasone was administered to four day old pups for a period of three days. The first group of rat pups was sacrificed immediately after the last administration and the remaining groups were sacrificed at intervals of seven days. Results showed degenerative changes in the neurons of the hippocampus of the first group of rats. Less cell damage was observed in the groups that were sacrificed at later stages. The times of eye opening was advanced and abnormalities of posture and gait were observed in the initial stages of treatment and immediately after withdrawal of the drug. These abnormalities reduced as the animals aged. This suggests that the pathways of neural development may have reached normality by the third week of life.

**KEYWORDS:** Glucocorticoids, Hippocampus, Post Natal Development, Wistar Rat

## **Neurogenesis in the Mammalian Central Nervous System**

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### **ABSTRACT**

Medical science have believed firmly for over a century that brain cells are incapable of recreating itself just like other cells of the mammalian body. That the adult brain is static in number developing as dendrites and synapses grow around a fixed number of neurons after birth. Over the past two decades, research have confirmed that adult neurogenesis, the process of generating new neurons which integrate into existing circuits after fetal and early postnatal development has ceased, actually occurs in the olfactory bulb and hippocampus of mammals and indeed man. In addition there is a high level of adult neurogenesis in the olfactory epithelium where olfactory receptor cells are constantly replaced. Furthermore, many vertebrates have neural regeneration capacities that involve neurogenesis (such as tail regeneration in salamanders). This scientific paradigm shift in our view of neurogenesis in the CNS is bound to aid the treatment of certain human disorders if advances in scientific research are able to tackle the unanswered questions. This paper reviews the status research so far and reflects on the current direction of adult neurogenesis in the mammalian central nervous system.

**Key words:** Neurogenesis, Mammals, Human, Brain