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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 weights 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.

Keywords: Incidence, Birth Weight, Preterm

Low birth weight is the category of babies weighing less than 2,5 kilogram and normal birth weight includes the rest. For many years the presumed reasons for low birth weight (LBW) was as a result of premature delivery. The term LBW and premature were used interchangeably in the scientific literature from the 1920s to the 1960s. But studies conducted between 1950 to 1960 showed that not all small babies are premature, and not all premature babies are small. Thus in 1961, the World Health Organization (WHO) recommended that LBW no longer be used as official definition of prematurity (Mac Dorman et al 2001).

The term "Intrauterine Growth Retardation" (IUGR) or "small for Gestational AGE" (SGA) was now introduced for those babies born at term but with weight of less than 2.5 kg (Mac Dorman et al 2001).

Some Identified causes of LBW could be fetal defects, multiple births, Malfunctional placenta, maternal health status, preterm birth, low socio-economic status, and high maternal age. (Offen- bacher et al 1996, Hillier et al 1995).

MATERIALS AND METHOD

This is a retrospective review of the data on birth weights from three specialist medical centres in Enugu and Anambra State. The period in study was from 1998 to 2001. A total number of two thousand, three hundred and eighty five (2,385) birth weights were considered. The weights were classified into groups according to sex, type of birth (i.e single or multiple) and method of delivery (i.e. vaginal or caesarian section).

RESULT

Out of the total number of 2,385, 180 weights fell into the LBW corresponding to 7.5% of the studied population. In the group classified according to sex, 6.3% of the males had LBW, while 9.4% occurred in females. 6.2% of the single births had LBW while 47.4% occurred in multiple birth 6.4% of the LBW were through vaginal birth while 17.2% were through caesarian sections. From this study and other previous studies LBW has been recorded to be higher in females (9.4%) than in males (6.3%). Multiple birth accounted for highest incidence of LBW (47.4%). This study also indicated that babies born through caesarian section have higher tendencies of under weight than vaginal birth.

Table 1: Method of birth by sex of the low birth weight babies

	Vaginal Birth		Caesarean Section	
	Male	Female	Male	Female
Mean	1.93	1.95	1.83	1.82
Standard Deviation	0.45	0.46	0.58	0.45
Frequency	52.0	74.0	19.0	35.0

Table 2: Types of birth by sex of the low birth weight babies

	Single Birth		Multiple Birth	
	Male	Female	Male	Female
Mean	1.84	1.90	2.01	2.02
Standard Deviation	0.53	0.46	0.33	0.46
Frequency	47.0	89.0	24.0	20.0

Statistical Analysis of the LBW babies (table 1) could not show any statistical difference ($p<0.5$) between LBW babies born through vaginal method and those born through cesarean section. Also within the same level of confidence, analysis of the respective weights by sex showed no statistical difference either.

The same analysis when carried out amongst these babies according to their birth methods (Table 2) showed no difference between the singleton babies and those of multiple births ($p < 0.05$). These analysis rule out the use of sex, birth type and birth methods to form groups or classifications within LBW babies.

DISCUSSION

The number of Children who die before their first birthday should be a measure of health status of any nation; its reduction an indicator of progress. LBW has been noted to be the principal predictor of infant mortality (Abrams et al 1991), and infant risk (Mac Dorman et al 2001). Since most of the factors predisposing the child to LBW are preventable, (i.e preterm, IUGR, maternal health status etc. Therefore LBW is preventable. The incidence of 7.5% of LBW gotten from this work is not too high but stands to be reduced. This is against the same 7.5% recorded in United states in 1997 (Michigan department of community health 2000; United Nations Demographic Year book. New York 1991). While Michigan in 2000 recorded 8.02%
A UNICEF, evaluation database from Yemen reports 6.9% LBW in males and 7.6% in females as against 6.3 in males and 9.4 in females discovered from this work. It gave an overall incidence of 14.6%. It also reported an incidence of 17% for 38 countries with very high under-five mortality rate.

There has also been a variation between the incidence of LBW amongst ethnic and racial groups (U.N. Demographic yearbook N.Y. 1991) Black infants have been reported to have higher incidence of LBW 8.4% against white infants 3.6% (Murray et al 1988). A United State national data from the 1996 monthly vital statistics Report shows that 8.6% of Black American infants are born at preterm LBW in comparison to only 4.1% of European American infants.

In conclusion, preventable factors, which predispose infants to LBW and the eventual increase in the infant mortality Rate, should be reduced or completely abolished. Such factors of which include the recently discovered bacterial vaginosis BV, which is know to affect between 12-22% pregnant women, and has been associated with up to 40% preterm births. (Paige et al 1998, Golden berg et al 1998). Douching which increases this infection (Aral et al 1998, Hillier et al 1997) should be discouraged.

Maternal stress is also associated with LBW (Rando et al 2003) Probably as a result of pressures of low economic status, social class etc. These are factors that need be attended to in our environment.

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