EDITORIAL

SECAN at 10: Underpinning the Frontiers of Anatomy in Medical Education

C.I.P Anibeze Ph.D FECAN

Professor of Anatomy & Deputy Provost College of Medicine and Health Science, Abia State University, Uturu. Nigeria

From the time of Aristotle the study of relationships between form and function in the living world has been considered a fundamental part of education in the life science (Blits 1999). Almost all biological and applied biological science (medicine, agriculture etc) graduates were required to demonstrate some skill in dissection of animals and man and also the conceptualization of model organisms.

Medical students spend fruitful hours with cadavers and tissue slides under the tutelege of anatomy professors, gaining a working knowledge of the human body that served as the basis for their medical education. Basic medical scientists (outside anatomy) also have compulsory anatomy courses as part of requirements for certification.

Today, this basic understanding of the pivotal role of anatomy in medical education seem to be waning especially in developed countries. There has been gradual reduction in gross anatomy courses hours. Paalman (2000) noted that modern molecular biologists in the US earn impressive degrees, and pursue fundamental questions of developmental genetics and molecular medicine without ever having taken a single unit in basic histology or development. The situation is worrisome and has thrown up challenges to anatomists in the developed world to begin to explain the amazing craze of curriculum developers emphasizing less and less of the structure of the human form.

Although this situation has not completely creeped into the medical schools in Africa and some developing countries however, the gradual reduction in dissection hours through increase in number of students per cadaver and less emphasis on histology slide preparations in favour of robust digital technologies in visual anatomic presentations are pointers to the same reductionist approach. Indication are rife that once the system is perfected in the developed countries, it will began to make a downward journey to the developing and African countries. This is without resource to the unavailability of high-tech diagnostic techniques in most sub-saharan institutions.

Several reasons have been adduced for the present situation ranging from scarcity of cadavers to the introduction of problem-based learning in medical education. But whatever reasons, should one method be adopted to the exclusion of the others? What should form the basis and what should be complemntary to the other?

Core anatomists have argued that a good understanding of anatomy arms the physician with proper hands-on investigative techniques that may lead to less use of complex radiological techniques in diagnosis. However, it does appear that the aggressively litigious society of the developed world may well be responsible for an upswing in high-tech and high-cost diagnostic proceedures as doctors fear being subjected to unnecessary litigations on patient negligence.

All said and done, scientists must come to grip with the fact that improved education of doctors in the basics of anatomy rather than the hottest new detection system could in the long run be the most cost-effective approach to improved diagnosis. The present scenario should be a wake-up call to anatomists worldwide that, if we are not careful, medical research of the 21st century (the century of Biology) will have little working knowledge of arguably the first and foremost discipline of biology itself.

Since the dawn of the 21st century, several professional associations/societies have been articulating position papers on the place of anatomy in medical education.

The American Association of anatomists (AAA) have presented position papers on critical areas such as:

- relationship between anatomy and modern medicine
- the position of anatomical knowledge to clinical medicine with reference to imaging, and
- the potential effects of lack of anatomical knowledge to clinical practice with respect to imaging (Yates 2000).

The need for such position papers continues especially in the developing countries. The Society of Experimental and Clinical Anatomists of Nigerian (SECAN) is ever poised to add its voice to this growing concern.

The health of a scientific society is reflected on two key areas: the success of its annual meetings and the regularity of its outreach (via journal, newsletter etc.). The tenth scientific congress of SECAN which comes up between 24th - 26th March 2011 at Enugu Coal City promises to hold a robust interactive session for scientists especially the place of anatomy in medical education.

The Theme - Medical Education in the New Millennium is apt to draw insights into the frontiers anatomy in medical education. Given the rising cost of medical treatment and the unavailability of health insurance schemes, the saying that a thorough knowledge of anatomy would be able to limit the expensive techniques of diagnosis that may otherwise be unnecessary- will began to form key areas for discussion especially in countries like Nigeria where incomes for majority of the populace are low. Indeed modern physicians may be too quick to refer to MRI or CT scan when perhaps much data could be generated more rapidly through conventional radiography and traditional hands-on investigative techniques of an experienced diagnostician with a thorough grasp of body structure.

The sub-theme of SECAN at ten (Enugu Coal City 2011) congress which is - Molecular anatomy and Gene therapy - will also offer an opportunity to explore the inseparable relationships of anatomy in the development of molecular medicine. MRI, CT and other high-tech diagnostic procedure are medical facts of life and serve to provide more details of the body structures. Infact, the universal use of MRI and CT technology has been described as Anatomy *in vivo*.

Both the theme and sub-theme of the tenth SECAN congress is geared towards underpinning the basic facts of anatomy in medical education. Perhaps the most scathing indictment of the US medical curriculum which should serve as a food for thought to all anatomists worldwide came from a Vertebrate Anatomy Professor who has taught at the medical undergraduate level. Said he: "The greatest incompetence I see in the medical profession today is the lack of knowledge about the human machine. Much time and trouble would be saved with more emphasis on the structural and functional relationships within the human body" (Paalman 2000). Partly to blame is our poor understanding of the relevant disciplines required to capture the diverse realms of anatomy. As Anibeze (2007) puts it: what is done in the laboratories have drifted far away from our teaching mission.

The great strides of SECAN congresses have become insparable from the active status of the society's official journal - The Journal of experimental and Clinical Anatomy (JECA). Coinciding with SECAN's ten years anniversary is JECA's uninterrupted and systematic journal production for the past decade. With active visibility though African Journal On-line (http:/www.ajol.info), African Index Medicus (http://indexmedicus.afro.who.int/journal) and SECAN website (www.secannigeria.com), JECA has maintained high standard peer-reviewed publication of articles in diverse areas of the anatomy of man and animals.

The current anniversary issue has, in addition to high quality articles included the abstracts of JECA publication since its debut. Our founding President, Prof. FC, Akpuaka reviews the trends in Anatomy Education and adds his views on the current issue of approaches to the teaching of Anatomy for meaningful medical education.

From all indications the tenth scientific congress of SECAN promises to be a gathering of scientists to promote anatomy research and scholarship in Nigerian and beyond. All past Presidents of the society are expected in the Coal City. The gathering will represent a place where the society can establish goals and refocus on existing ones for the next decide.

The present period offers an exciting and challenging time for the anatomical sciences. In the usual words of the SECAN founding President - "We must work enthusiastically to keep alive and preserve our anatomy disciple". In the same vein, Paalman (2000) charges anatomists: "Don't let the century of Biology forget from whence it came: a history built upon anatomy".

Literature Cited.

Anibeze CIP (2007). The Nigerian anatomist in the New Millennium. J. Expt & Clin Anat **6**(1&2):ii

Blits KC (1999). Aristotle: form, function and comparative Anatomy. Anat rec (New Anat) **257**:58-63

Paalman MH (2000). New Frontiers in Anatomy Education Anat Rec (New Anat) **261**:47.

Yates RD (2000) Anatomy: A new Look. Anat Rec (new Anat) **261**:95-96.