HISTOPATHOLOGY PRACTICE AND TRAINING IN NIGERIA - A MODEL

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SUMMARY

OBJECTIVES:
Contemporary histopathology practice and training in Nigeria have been plagued by the fundamental issue of inadequate exposure to surgical pathology material by both trainees and trainers. This paper critically examines the factors that affect the discipline and profers practical solutions to aid its advancement.

MATERIALSAND METHOD:
This review is based on the authors experience and observations of histopathology practice in Nigeria.

RESULTS:
The Nigerian health sector is plagued by many ills including poor funding, weak policies, dilapidated structures, disgruntled and frustrated practitioners, amongst others - and pathologists are not immune to all these. In recent times, there has been a proliferation of accredited training centres as well as medical graduates interested in the specialty of histopathology. The busiest histopathology laboratories in the country ascession between 2200 and 5500 surgical samples yearly. Thus there is inadequate exposure by histopathologists and trainee pathologists to surgical materials with the attendant consequences. Many centres still rely principally on routine haematoxylin-eosin stains. There are no nationally agreed standard reporting formats for most diseases.

CONCLUSION:
The development of a deanery or regional system of accredited histopathology laboratories may form the fulcrum for improving the overall quality of histopathological services and training in Nigeria. This will help develop local expertise and ensure adequate exposure to teaching aids and surgical materials. We hope that the proffered solutions will help encourage local pathologists to continue and increase their efforts to raise the profession up to enviable heights.

KEYWORDS: Histopathology, practice, training, nigeria, model

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INTRODUCTION

Histopathology services in Nigeria, like other parts of the world, not only lie at the heart of the health care services provided for patients, they are also essential to the achievement of many of the national priorities and targets set for the entire health care delivery system[1]. More than ever before, clinicians are realising the vital role played by histopathology in patient management especially with regards to diagnosis, treatment options and prognostication of various diseases.

Pathology is the foundation of the house of medicine.[2] The increasing subspecialisation and sophistication of clinical medical practice requires a commensurate subspecialisation and sophistication of histopathology practice and pathologists are required more than ever before to make their systems safe, effective, patient-centred, timely, efficient and equitable for patients.[2]

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Although subspecialisation and sophistication in pathology are far behind those in the clinical specialities, it is still important that these attributes are passed on from the trainers to the trainees through well organised and efficient training systems which form the bedrock of the discipline.

To say that pathology practice and training in Nigeria are faced with many challenges is to say the least. Here pathologists make up only a small fraction of the physician population, who in turn make up a small fraction of the society. As such, the Nigerian pathologist's individual voice is very weak. Nevertheless, in order to have a meaningful voice in, and some degree of actual input regarding, the changing face of medicine today including the profession itself—let alone society at large—pathologists must work together.[3]

This paper critically examines the issues that currently affect the specialty of histopathology in Nigeria and proffers some practical solutions that should help in its advancement.

The Problem

Indigenous contemporary histopathology practice dates back about five decades ago when a few pioneer histopatholgists (from the very small pool of doctors interested in the discipline) were sent out from Nigeria for postgraduate training mainly in Germany, the United Kingdom and the United States of America. This initial crop of pathologists upon return back to the country initiated the training of other pathologists. Although they operated at levels comparable to the Western world with regards to the quality of service they rendered, guidelines for training at that time were very rudimentary and not as rigorous as they are now. In recent times, however, the speciality has witnessed such a massive surge in interest that the National Postgraduate Medical College of Nigeria (NPMCN) and the West African College of Physicians (WACP) have had to introduce the Primary examination to limit the number of potential candidates admitted into the Colleges for training. Despite this strategy, candidates for training still far outweigh the number of available training positions even though many more training centres have emerged over the years in response to the ever increasing health demands of the Nigerian population. The modest increase in the number of trainers has, however, done little to solve this problem.

With the increase in the number of histopathologists and accredited training centres comes the emerging problem of insufficient pathologic samples for training both the trainee and the trainer who is expected to see an average of 2000 surgical pathology specimens yearly (according to various internationally recommended standards) to remain on top of his or her game.[5,6] The average number of surgical specimens processed in the 8 most busy histopathology laboratories in Nigeria ranges from 2200 to 5500 while the average number of cases seen per pathologist in these centres ranges from as low as 420 to as high as 786 in the busiest centres (table 1). These figures fall short of the internationally recommended standards. The situation has worsened over the last few years following the industrial unrest that has plagued the Nigerian health sector as a result of the professional rivalry within the system. This is against the backdrop of prolonged political mismanagement, civil war and repressive military regimes which seem to have contributed in large part, to a lack or gross inadequacy of funding for basic social services and health care infrastructures.[7] This has resulted in a steady decline in the average number of surgical specimens received yearly in most of the laboratories. Thus, both the trainees and their trainers are exposed to an inadequate number of surgical materials with the attendant consequences, not least of which the fact that adequate competence is not achieved in various aspects of the specialty. This trend currently remains the greatest threat to the advancement of the discipline in Nigeria.

Although most centres have an adequate number of pathologists and trainees for the volume of work they perform, the available number of pathologists in each centre still does not allow for proper subspecialisation with the attendant effects on the quality of services and training. This is further compounded by the fact that most centres do not use ancillary techniques especially immunohistochemistry. At best, most of the specimens are evaluated largely with routine haematoxylin and eosin stains with only limited use of histochemical stains.[4]

In addition to these, there are no nationally agreed standard formats for reporting most surgical pathology specimens especially for malignant diseases as have been developed in more advanced countries where minimum reporting datasets have been developed for various cancer and non-cancer cases and multidisciplinary teams meetings developed for various cancer sites.[5]

The Proposal

A. Training - expanding and monitoring workload

It is mandatory and expedient to find ways of expanding the workload so that trainee pathologists can be well exposed to an adequate volume of surgical pathology material as this will also ensure an improvement in the consultant pathologist's expertise.

We propose, first of all, that the various pathology centres in the country be grouped together into as many regions as there possibly and practically can be. The largest laboratories in each of these regions will then be designated as the regional training centre. Each regional centre will have well developed links with the other pathology departments in the same region who will be encouraged to get accredited for training. This will involve public as well as large, willing and accredited privately owned histopathology laboratories. For example, a Lagos deanery can cover accredited laboratories in Lagos and Ogun states. Trainee pathologists in each designated region will have a structured format for rotating through all the various laboratories within the region. This is to ensure that they are exposed to as many surgical materials as possible. Nevertheless, trainees in their first year of training will spend that whole year in the teaching hospital where they were primarily employed. We propose that in the course of his/her training, a trainee should spend at least a third of the overall junior residency training period in a general hospital and/or private pathology laboratory that is designated for formal training.

For this purpose, it is essential that the postgraduate

medical colleges which oversee residency training develop a deanery system to supervise such a training programme. The head quarters of such a deanery system could be situated at the postgraduate medical colleges while regional deans or training programme directors (TPD) are appointed to coordinate the programme in each region. In this regard, it is important that the two postgraduate medical colleges operating in the country harmonise their functions and avoid duplication of resources. Each deanery will also have a local committee chaired by the Dean or TPD and composed of representatives from the various centres covered by that deanery. The functions of the deanery will therefore include coordinating the rotation of trainee pathologists through the various laboratories within the deanery.

In order to ensure that this system runs optimally, and as a quality control measure, the trainee pathologists will be required to keep a log book of their activities and rotations through the various laboratories. In this regard the postgraduate medical colleges will also determine quantitatively the minimum levels of competence to be achieved by each trainee by giving guidelines as to the minimum number of cases of each type of disease or surgical specimens that should be seen by each trainee before sitting any of the postgraduate examinations. To enforce this, the training programme committees will be empowered to conduct a yearly assessment of competence for trainees, otherwise called the annual review of competency. Thus the manual for training should be provided for every pathology resident, and indeed every trainer, at the commencement of the training programme. This manual should, however, be reviewed periodically.

As has been previously suggested by other authors, the development of digital pathology is critical to any planned strategies which aim to increase the specimen volume through virtual microscopic pathology using web-based technology.[4] To this end, good internet access must become an integral part of the infrastructure of all pathology laboratories accredited for training. A virtual pathology school can be created to cover all the various disciplines and resident doctors are made to formally rotate through the various disciplines under the supervision of a faculty that has been specifically trained for this purpose. It will be wise to ensure on the long run that local pathologists in each deanery are specially trained for this purpose through collaborations with international pathology organisations whose ultimate goal is the development of local manpower for this purpose. The international faculty will assist in developing the bank of training materials for this purpose. This bank will also include videos on how to do surgical pathology cut-ups in the various specialties. This will ensure that trainee pathologists are exposed to the same volume of specimens that their counterparts in advanced countries are exposed to.

B. Practice – improving local expertise and specialisation

In order to ensure the success of the proposal outlined above, local pathologists working in the teaching hospitals must be encouraged to develop expertise in two to three disciplines owing to the severe shortage of pathologists and limited number of specimens in the country. Developing expertise in a particular specialty means that such a pathologists handles and reports all specimens in that specialty submitted to the department. This specialist also provides second opinion to colleagues working in the general hospital setting within their designated deanery. Such a system is important for the budding specialist to build experience which will be vital for proper training of the resident doctors in pathology and the delivery of quality health care services. It is important for the postgraduate medical colleges to help build this capacity by collaborating with postgraduate colleges in developed countries. The virtual pathology school previously outlined will be developed and used to build this capacity. Moreover, observership and/or fellowship programmes will be formally developed through this collaboration in order to build local expertise in the various specialties. The regional deanery will be especially useful in formally and systematically coordinating this exercise. At the moment, local expertise is being developed at the instance and expense of individual pathologists who have the desire to improve on their skills without assistance from the government or postgraduate colleges.

To strengthen such system requires specifying a minimum number of cases for teaching hospital pathologists and for the district/state hospital pathologists. For example, teaching hospital pathologists who specialise in no more than 3 areas of pathology should report a minimum of 500 cases (including cytology and autopsy histology) per year allowing for their teaching, second opinion and CPD commitments. In contrast, other centres should do general pathology and each such centre should have at least two pathologists each of who should report 1000 specimens per year. Having such numbers will be useful for employing more pathologists into the various departments by making demands based on workload numbers.

C. Regulations – ensuring and maintaining competence

For this whole system to be self sustaining, certain regulations must be put in place to ensure, enforce and

monitor professional competence by all concerned. To facilitate this, the postgraduate medical colleges must set up a professional standard unit as well as a monitoring unit. It is important that the colleges specify the standards to be met by each pathologist at the various levels of competence. For example, the colleges must set a minimum number of cases to be reported by both specialist and general pathologists putting into consideration the fact that specialists who work in teaching hospitals will also have teaching and continuing professional development commitments. Such numbers are useful when arguing for more establishment positions in the various histopathology departments as the workload progressively increases.

Formal and compulsory external quality assurance (EQA) schemes should also be set up at the regional or national level. These will be registered and monitored by the postgraduate colleges with certificates of participation submitted for verification in the yearly assessment of pathologists in the country. This will be in addition to the continuing professional development (CPD) activities outlined by the colleges for which annual returns will be made by each pathologist. The postgraduate colleges must develop appropriate guidelines for CPD activities and specify the minimum number of points attainable for the renewal of the pathologist's annual practicing licence. To this end the monitoring unit should be empowered to carry out its oversight functions. The regional committees set up by each regional deanery may well carry out this function.

CONCLUSION

The development of a deanery/regional system of accredited histopathology laboratories may form the fulcrum for improving the overall quality of histopathological services and training in Nigeria by ensuring the systematic development of local expertise and adequate exposure to teaching aids and surgical pathology materials at levels comparable to internationally acceptable standards.

The Nigerian health sector is plagued by many ills – poor funding, weak policies, dilapidated structures, disgruntled and frustrated practitioners, amongst others - and pathologists are not immune to all these. The solutions proffered in this proposal are an attempt to join hands with many of our colleagues who have and still are silently labouring to strengthening the system. Without them the practice and by extension training would have collapsed. We hope that many more will be encouraged to continue and increase their efforts to raise the profession up to enviable heights.

Table 1: Average surgical pathology specimens received in some of the busiest histopathology laboratories in Nigeria. (Survey carried out by the authors)

Centre	Number of Consultant staff	Range of surgical specimens/year	Average annual number of specimens	Average annual number of surgical specimens/pathologist
Ibadan	8	3700-4000	3800	475
Lagos	8	3300-3750	3500	437
Benin	8	3400-3600	3500	438
Zaria	8	3800-4200	4000	500
Jos	5	3300-3600	3500	700
Nnewi	5	2000-2500	2100	420
Ife	5	2000-2500	2200	440
Kano	7	5300-5700	5500	786

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