

# Speaking for Myself

## Addressing the gaps in cytopathology training: The transition from resident to practitioner

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It is not unusual to see young doctors who were confident as residents face the 'slings and arrows' of private practice. Much of this is due to the teaching structure and general pattern of education in Indian medical schools. It is unlikely that there have been sweeping changes in the pattern of education in most medical colleges over the past five decades despite overwhelming changes in the practice of medicine during this time. A substantial number of students have limited access to learning new skills or revising old concepts once they leave medical school. There are no reliable data on the percentage of doctors in India in private practice or in the public sector. However, private practice is more popular than government service. A recent study of one specific batch of students showed that 94 of 106 students on whom data were available had opted for the private sector.<sup>1</sup>

I shall use the subject of cytopathology to discuss some shortcomings of our educational system and some possible remedies. Of course, this approach can be adapted for other areas of medicine and medical education.

Our current method of teaching pathology consists of rotating a student through different aspects of the subject, including cytopathology, over a period of three years. That postgraduate training in pathology in India can be improved upon and the manner of doing it have been discussed by Bhusnurmath and Bhusnurmath.<sup>2</sup> Their paper deals with pathology in general; however, given that cytology is a part of pathology, all the lessons apply. Some of the deficiencies in the current system include lack of a defined career track in branches of laboratory medicine, absence of teaching of communication skills and professional behaviour. Similarly, a recent paper from the College of American Pathologists also addresses the best practices in preparing residents for practice because of such training gaps that are increasingly obvious.<sup>3</sup> Finally, we learn from an editorial from England that cytology is the major reason that candidates for FRCP Path Part 2 fail their examinations.<sup>4</sup>

Clearly, there seems to be consensus among experts across continents that there are gaps in the training of postgraduates in pathology and that these gaps include cold clinical medicine as well as social and practical aspects of medical practice.

### *Holistic education*

What is good training? Sir William Osler, the great physician-philosopher of the 19th and early 20th century, and someone who contributed greatly to pathology, had this to say: 'A great university has a dual function, to teach and to think...that duty which the professional corps owes to enlarge the boundaries of human

knowledge.'<sup>5,6</sup> Many of our universities have been lacking in the crucial second function: to think. This is reflected in many ways: one obvious result is the dearth of original creative scientific ideas and research papers from India. The malady seems to extend beyond education; for instance, a report in the newspapers quoted Greg Chappell, the Australian cricketer and ex-coach of the Indian cricket team as saying that Indians are not good leaders (and by extension, are good only as followers).<sup>7</sup> Predictably, many cricketers and the media were upset with the statement. But the reality is that Chappell was right and there is ample evidence for his statement.

There are about 320 medical colleges in India with extremely non-uniform teaching standards as well as examination standards at both, the undergraduate as well as at the postgraduate levels. Certain subjects are barely taught in medical college: medical ethics, legal issues in medicine and how to deal with them, medical finance and budgeting and finally, communication. For instance, postgraduates in pathology are not taught the process of how to evaluate different instruments, selection of reagents, dealing with 'difficult' patients, basic laboratory and inventory management, etc.—all of which are crucial in real life. It is imperative that the Medical Council of India improve the standards of the existing colleges, introduce reasonably uniform standards and raise the bar of teaching.

### *Problems unique to cytology*

Specific challenges to cytology also exist. Financial issues dictate the practice of medicine and pathology in the private sector, unlike in teaching institutions. While reviewing data on lymph node surgical biopsies in our hospital recently, we realized that only 14.4% of lymph nodes were reactive, in a similar lymph node biopsy audit in a university setting, as many as 35% nodes were reactive. We suggest two reasons for this: first and foremost, a question of economics and second, the preference to perform fine-needle aspiration (FNA) over formal biopsies where feasible.<sup>8</sup> All things being equal, economics dictates medical practice in the private sector. Unlike a teaching college hospital, where teaching and training is given equal importance to service, in the private sector, teaching is secondary to service. Training a young surgical resident to perform a lymph node biopsy is part of the training and is actively encouraged in a university hospital. In the private sector, however, a biopsy that may be of doubtful value is unlikely to be done. Similarly, in private hospitals, based on my experience over many years as well as that of colleagues in similar settings, benign lesions such as fibroadenomas are rarely, if ever, subjected to FNA. FNA is unlikely to yield a surprise diagnosis and is unlikely to change the management protocol. Finally, because the margin of error is greater in cytology compared to biopsy

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pathology—in part because of the lesser experience in cytology and because of the risk of litigation—again applicable largely to the private practitioner and rarely, if ever, to the pathologist in a teaching hospital, there is a tendency to biopsy any lesion that may not offer an obvious, clear-cut diagnosis on cytology. Litigation is relatively uncommon as yet, in India, but is clearly on the increase. While postgraduate students often passively learn the importance of appropriate wording of a report and of honesty and clarity of communication with patients and fellow physicians, it is preferable to actively educate such matters. Finally, defensive medicine is more likely to be practised in a private hospital—and there is no doubt that there is an explosion of private hospitals in India.

Core biopsies are gradually replacing FNAs of breast neoplasms as these biopsies yield tissue for immunohistochemical studies; subsequently, there has been a decrease in the number of breast FNAs, which is among the most common sites of FNA, both in the literature as well as in our practice.<sup>9</sup>

#### *Addressing the gap: A historic, yet practical view*

What are the practical solutions to narrow the gap between the student and the practitioner? Again, the very practical Osler offers a way out. The student–practitioner, his term for young doctors who have just graduated and started practice, ‘requires at least three things with which to stimulate and maintain his education, a notebook, a library and a quinquennial braindusting’. In the notebook, he advises, the student–practitioner keep a record of ‘the study of cases, the relation that they bear to each other and to cases in literature...’. He advises that the student–practitioner ‘read with two objects: first, to acquaint yourself with the current knowledge on the subject and the steps by which it has been reached; and secondly, and more important, read to understand and analyse your cases... Everyday, do some reading or work apart from your profession.’ Finally, he states: ‘The third essential for a practitioner as a student is the quinquennial braindusting, and this will often seem to him the hardest task to carry out. Every fifth year, back to the hospital, back to the laboratory, for renovation, rehabilitation, rejuvenation, reintegration, resuscitation, etc.’<sup>10</sup>

Osler’s suggestions on keeping a record of unusual cases is a simple and obvious way of learning from one’s past patients, including learning from one’s mistakes. That keeping up-to-date with the literature of medicine is essential is also self-evident. Fortunately, in the age of the internet and the information superhighway, it is much easier to keep abreast of changes in medical knowledge. As for Osler’s reference to non-professional reading, we have already suggested such reading for doctors.<sup>11,12</sup>

#### *‘Braindusting’ is easier in the laboratory sciences*

But it is the element of braindusting that one needs to seriously consider. Currently, there are no formal courses offered by any of the medical colleges and universities for those pathologists who are keen to retrain in a subject. Some institutions offer long-term or even short-term courses varying from 3 months to 1 year in cytology; this usually involves getting a postgraduate diploma or a certificate course (a postdoctoral certificate course). The Indian College of Pathology runs a post-doctoral course in cytology too. However, these courses are practical only for either young postgraduates who are yet to start practice or for pathologists who are allowed an absence of leave or deputation leave from their institutions. The reality is that the vast majority of pathologists who practise cytology are in solo private practice in diagnostic laboratories or in private hospitals, where the concept of study

leave simply does not exist. It is time that learned bodies such as the Indian Academy of Cytology considered introducing short-term refresher courses of 1–2 weeks. Even a short stint in a teaching institution should be adequate because the courses will add to or enhance the knowledge of the practising pathologist. Do remember that the pathologist in practice may be rusty, but already knows the basics of the subject. To those who can only afford to do shorter periods, a 1-week or 2-week fellowship may be the answer.

By their very nature, diagnostic sciences such as cytopathology and surgical pathology (as well as radiology and imaging) offer learning opportunities similar to those available to residents. Unlike, say, surgery, where one can only hope to watch and learn or at most, assist in surgery, in these subjects, one can see the slides (or images) independently, or with the pathologist signing out the case, and learn from it.

Relatively new changes that have been introduced in the practice of cytopathology include thin prep smears and the Bethesda classification for thyroid aspirates. These are not used by most pathologists in the private sector in India and are also not in use in most university laboratories. Even the use of Bethesda classification in Pap smears is restricted to some institutions and to a few laboratories in the private sector, although the system has been around for over two decades.

Most state medical councils in India have introduced the concept of attending a minimum of hours of continuing medical education (CME) per year to keep one’s licence to practice intact. However, most of these CME credits are gained by attending CME lectures. While this undoubtedly improves medical knowledge, the CME is restricted to largely theoretical knowledge; it should also include practical knowledge. In pathology and laboratory medicine, it is only the laboratory that can provide the environs for such an activity.

#### *Start young*

Finally, it is important to catch them young: the pros and cons of cytology must be emphasized at the undergraduate level. After all, most undergraduates will go on to practise clinical medicine and have little idea of what solutions their cytologist colleague can offer to them, in the management of their patients, only because the realities of the subject of cytology was not taught to them. There is hardly any teaching of cytology in the undergraduate medical curriculum. For example, the pros and cons of FNAC, as well as its limitations must be emphasized both conceptually as well as in practical terms. That cytology itself has progressed and that the newer techniques of molecular biology are now being applied to cytological specimens need to be emphasized at both the undergraduate as well as at the postgraduate levels. Further, the amount of time postgraduates spend in cytology during their MD training needs to be increased. The emphasis in most MD courses is on histopathology; however, histopathology forms only a small part of laboratory practice while cytology is equally important and needs more attention than is currently given to it. Whether this may involve increasing the time period for the MD course is a moot point. (Given that all branches of medicine have had an exponential increase in knowledge, the same argument may perhaps be extended to them; the hitherto 2-year DM courses, have, now been increased to 3-year courses.) The time to act is now.

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Our group at the Sanjay Gandhi Postgraduate Institute of Medical Sciences (SGPGI), Lucknow has been organizing workshops since 2010 on various aspects of clinical research, as part of an Indo-US collaboration. In continuation of the series, two workshops are planned in 2016 at SGPGI, Lucknow as follows:

- (i) Workshop on 'Writing a Scientific Paper', 13–15 May 2016
- (ii) Workshop on 'Basic Biostatistics', 26–28 August 2016

These workshops are meant for active biomedical researchers who hold faculty positions and are poised to lead or are leading clinical research studies. These interactive workshops will have both didactic and practical sessions. Around 30 applicants will be considered for each workshop.

Those interested in attending the workshop(s) should fill the application form (which asks for a summary of experience and expertise in clinical research available at <https://sites.google.com/site/sgpgimnihcourses/>) and send it as an email attachment to [sgpgi.courses@gmail.com](mailto:sgpgi.courses@gmail.com). The last dates for applications for the above courses are 20 March 2016 and 30 June 2016, respectively. A selection committee will screen the applications and notify successful participants about 5 weeks in advance of each course.

The National Institutes of Health, USA provides funds to partially support the costs of course material and venue for the conduct of these workshops. The registration fee is ₹5000 for participants who require accommodation (includes twin-shared guest house accommodation and all meals on all days). Those who plan to arrange their own accommodation will need to pay a registration fee of ₹2000. Participants are expected to pay (by electronic bank transfer) the registration fee soon after the intimation of selection.

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