SAMJ
EDITORIAL

PERSONAL VIEW

Chemical pathology — to be or not to be?

Being a surgeon means never having to explain: likewise psychiatrists, radiologists and paediatricians. Indeed, all medical specialists are instantly identifiable by even the most casual or ill-informed interlocutor; all, that is, except chemical pathologists.

Try telling your (erstwhile) 9-year-old offspring that you're a chemical pathologist: 'But I thought you were a doctor.'

'I am a doctor.'

A bemused look appears: 'But do you treat patients?'

'Well yes, I do treat a few patients, but mostly I do tests on blood, etc. Actually I don't do the tests, I supervise the technologists.'

The bemused expression turns to an amalgam of doubt, suspicion and disinterest. This sounds pretty paltry, next to Ian's dad, who's a lawyer — and patently a successful one.

'Look', I say, trying to retrieve the situation, 'tell them I'm a medical scientist!' The expression changes to one of relief. The partial truth has restored some measure of self-esteem and, more importantly, has put one's offspring on the same level as his mates. Maybe.

I would have liked to tell him that much of medicine is applied chemical pathology, that we assist budding doctors across the great divide that separates the tranquil universe of the basic sciences from the hurly-burly of the consulting room, the operating theatre, the hospital ward and the distant rural clinic. It would be nice to explain that, in order to supervise others effectively, you have had to do the investigations and understand them intimately through your mental and physical fingertips, just as a surgeon grasps the intellectual and physical sequences of a surgical procedure — without the attendant drama and gore, of course. It would be a burden to tell him that modern chemical pathologists are often directly involved in the management of patients, that they can contribute significantly to the cost-effectiveness of medical care and that our discipline encompasses the fundamental biochemical and physiological basis on which most of modern medicine rests. And all this would only be part of the story. It would be too much to expect the young and uninformed to understand that the core role of the chemical pathologist is to release the medical value inherent in the products of modern electronics, mechanical engineering, analytical chemistry, molecular biology and the clinical evaluative sciences. Or for him to be interested to learn that this involves an arduous apprenticeship in the basic sciences and scientific methodology, in clinical medicine, analytical biochemistry, management and administration and in the theory and practice of clinical chemistry, so that the modern chemical pathologist can assume a leadership role in the complex, and continually evolving, health environment.

Surely, however, such insights are not too much to expect from those in positions of authority at faculty, regional and state levels. Even we, within the discipline of chemical pathology, need reminding at times, and unless these insights can be converted into the currency of meaningful action, chemical pathology will continue to lose the critical mass and sense of direction essential to a viable discipline. All major stakeholders in the academic and the public health care sectors have a responsibility to safeguard this core component of the health care system.

Further questions

Beyond the confines of our parochial turf lie greater questions. What is the role of 'traditional' academic medicine in an environment marked by the scars of decades past, by gross uncertainty, by a lack of resources and by clamorous expectations from the previously disempowered and disinherited? Must we curtail the academic centres to divert funds to the primary network? Should chemical pathology be one of the 'luxury' disciplines to be sacrificed and should we willingly place our discipline on the funeral pyre?

In response, I would answer both 'yes' and 'no'. The health of the citizens of this country depends heavily on the restoration of normality, on economic growth, on the redistribution of opportunity and wealth, on education, on adequate nutrition, on targeted programmes of immunisation and other preventive or therapeutic measures directed at specific health problems. This will require money, including specific allocations from the health budget. But reconstruction also depends on the maintenance (and restoration) of the highest professional and academic standards throughout the health care industry and on the achievement of a balance between the still wealthy private sector and the increasingly impoverished and depleted public sector. We must be prepared to strip excess adipose tissue from our teaching institutions where such is found, but we need to bear in mind that as the academic organism runs out of fat it will turn to essential lean body mass for survival, making eventual recovery more difficult or even impossible.

While I could not explain all this to my 9-year-old offspring, I would like to bequeath him a health care enterprise that combines excellence with equity so far as is possible in an imperfect world. In this enterprise, an alert and adaptable discipline of chemical pathology will help create the bridges that link the patient, the clinical sector and the fundamental physical, chemical and clinical sciences to the benefit of society.

Threats to the discipline

I now wish to examine the threats to the viability of my discipline and suggest some pointers to the way forward.

1. **Numbers!** Table I summarises the number of medical and scientific staff in chemical pathology in some First-World countries and in South Africa. Expressed per capita population, South Africa has a nearly 10-fold shortfall. The KwaZulu/Natal region is even worse off than the rest of the country. To draw on the terminology of animal biology, we are close to the threshold of extinction. An examination of the composition of the South African Association of Clinical Biochemists deepens the gloom. Among the biochemists, who together account for 70% of the total membership, fewer than 5 have a clinical degree (e.g. M.R.C. Path. or equivalent). Most biochemists are therefore limited to relatively circumscribed, supportive roles. It is on this quantitatively depleted and qualitatively deficient foundation that our discipline precariously rests.

Table I. Chemical pathologists per capita of population*

	Chemical pathologists	Population (million)	Per capita
UK	1 500	55	1:37 000
Australia	1 300	30	1:23 000
Denmark	100	5	1:50 000
South Africa	140	40	1:286 000

* Approximate figures based on membership of professional societies or (in the case of Denmark) provided by a senior Danish chemical pathologist. The list includes scientists and medical specialists.

2. **The split between the private and public sectors.** It is generally true that the chemical pathologists in private practice make a minimal contribution to the future of the discipline. In my own environment I am fortunate to have the part-time service of two excellent chemical pathologists in the private sector for teaching purposes. Nevertheless, their input cannot substitute for the contributions of full-time academic consultants in the training of new staff or in the advancement of the profession. At the core of the problem lies the enormous difference in income (and often working conditions) between the private and public sectors. Until this schism is effectively addressed, our predicament will not be readily alleviated.

3. **Absence of a clear strategy.** This article has been written to establish an identity for chemical pathology in the eyes of our colleagues (not to mention my co-chemical pathologists), and as a first step towards our own survival. Our professional organisations, the South African Association of Clinical Biochemists and the College of Pathology within the South African College of Medicine have so far failed effectively to come to grips with our situation.

4. Finally, at times, we must contend with the **apathy, ignorance, active hostility or open competition** from a variety of sources, including health administrators, professional colleagues, technologists and other non-medical personnel within the pathology disciplines. Clearly these challenges need to be confronted rationally and constructive solutions sought.

Solutions

To some extent the solutions derive from the analysis of threat. One thing is certain, however; unless a sufficiently large and committed group of senior chemical pathologists come together to create the impetus for reconstruction and development the discipline will, at best, limp along or at worst, fragment and disintegrate. This article is, therefore, a rallying call. I would like to conclude by putting some ideas on the table for an agenda for change.

1. Revamp the training of chemical pathologists to meet our changing and evolving role. Consider closer ties with the other clinical pathology disciplines. Provide further post-registration qualifications in specialised areas, possibly in conjunction with the clinical disciplines.

2. Consider and explore closer affiliation with clinical disciplines both in the education of specialists and in terms of health care. Get involved in community, environmental and occupational health. Affiliate with departments of biochemistry. By these means, broaden the involvement of chemical pathology and seek allies and niches. On this (legitimate) basis, seek the increased numbers and variety of staff necessary to fulfil these roles and to create the essential critical mass in the discipline.

3. Address the private/public sector schism. This, of course, raises issues which go beyond the parochial interests of our discipline to include fundamental questions concerning the structure of our health care system.

4. Aim for the highest standards of service — make friends.

5. Recruit the best and most appropriate graduates into the discipline and provide career structures for scientists and others. While the medical graduate is central to any clinical discipline, we need not adopt a defensive stance in response to the claims from our scientific colleagues. The medical specialist is, however, entitled to insist that professional status demands professional qualifications and capabilities.

I am acutely conscious of how difficult the path ahead is and of my own failure to implement many of the above recommendations. Many circumstances lie beyond our control. We will need a powerful lobby to plead our case at all levels. I hope this article will spark a response so that we can confront our problems, united and determined.

G. M. B. Berger

Department of Chemical Pathology
University of Natal
Durban

Dokter en digter

Carpe diem

Het ook deur hierdie wasige horingvlies
eens 'n helder beeld op jou retina geval
en het dit ook hierdie gestolde
miokardium bo jou begrip versnel

Het hierdie fynbenaamde senings
van jou bevrore greep ook ge-aarsel
om haar nommer te skakel
of die eerste keer haar huiwerende hand te raak

En het jy haar ooit gesê
of moes dié bleekwit lippe hare
'n ewigheid ontsê
tot jy nou hier voor my op die disseksietafel lê.

Johannes Meyer