

The First Garnett Passe and Rodney Williams Memorial Lecture

Has the specialty of ENT-Head and Neck Surgery a future?

PROFESSOR SIR DONALD HARRISON

The choice of such a pessimistic title for this the first of a new Biennial Lecture must appear to be the epitome of cynicism.

Sydney Harris defined the cynic as 'one who reads bitter lessons from the past, and is prematurely disappointed in the future'. A more apt quotation today might well be that of Oscar Wilde, who defined the cynic as 'one who knows the price of everything and the value of nothing'. In reality, I like to think that I am more of a cynical pessimist with just a touch of optimism, and therefore well placed to review the future of a specialty that has during my lifetime witnessed a meteoric rise in status, but whose future must now be considered problematical.

There can be few surgical specialties which have undergone such dramatic developments within the last century as Otorhinolaryngology. From humble beginnings, confined to relatively undedicated self-educated practitioners, limited in both diagnostic and surgical opportunities, this specialty has risen to unprecedented heights of surgical and medical expertise.

What then provided this much needed stimulus to a specialty which had lingered in the doldrums of mysticism for so long? There is of course no single answer, but a combination of new biotechnological aids such as the binocular microscope, together with an awareness that practice need not be confined to wholesale removal of tonsils and adenoids, indifferent operations upon the nose and sinuses or destructive operations upon the ear, has provided a much needed impetus to young well-trained enthusiastic doctors.

To be absolutely fair, our predecessors were at a considerable disadvantage. Lacking the protection of antibiotics and modern anaesthesia, surgery was both dangerous and limited in scope, despite their enviable knowledge of morphological anatomy and individual manual skills. The specialty was largely confined to organs hidden from view, affected by life-threatening diseases such as tuberculosis, syphilis or diphtheria. Limited knowledge of the physiological behaviour of the ear, nose and larynx was probably of little importance. Indeed, it is quite possible that the much vaunted discoveries in laboratory science within the latter part of the 19th century had little immediate impact on the daily lives of patients or their doctors. They did, however, have a considerable impact on the public face of medicine and on the diagnostic skills of the doctors, if not on

their therapeutic capabilities. It is also quite possible that many of the 20th century's scientific achievements have themselves contributed to the environmental and social problems that we are facing today, and that future generations will need to solve!!

What the 21st century will bring time alone will tell, but from past experience any good will be offset by unexpected disadvantages. However, the medical profession in general, and this specialty in particular, has been considerably influenced by scientific developments particularly in the understanding of disease, its origin, prevention and management. For example, it was confidently anticipated by many that with the development of penicillin and other antibiotics the specialty would virtually vanish. This indicated the important role previously played by the ENT Surgeon in the management of acute mastoiditis and sinus infections, as well as removal of the tonsil as a 'focus of infection' and attempts at managing the 'running ear'. In fact the opposite occurred, for the advent of effective means of controlling infection provided the very impetus needed for the dormant seed to bloom!!

How then did we move from this 'Inglorious Past' to an 'Incredible Present' and a 'Doubtful Future'?

Despite the development of specialty examinations, surgical training within the United Kingdom and indeed elsewhere, had been largely based on the 'apprenticeship system'. Although historically justifiable, this was totally unacceptable as the basis for a revitalized specialty. Indeed, many of the existing so-called training programmes were clearly deficient in both content and structure, as became abundantly clear during the inspections carried out by the newly constituted Special Advisory Committee in 1971. Although now drastically modified in the wake of modern day needs and political pressures, it was the institution of a coherent structured form of education that I believe was the catalyst for the 'Reformation of Otorhinolaryngology'.

However, over three-quarters of a century had passed before this Educational Renaissance occurred, and it would be uncharitable, as well as inaccurate, if I suggested that nothing of value had occurred prior to this time. As Longfellow wrote in his 'Resignation' – 'Lives of great men all remind us, that we can make our lives sublime, and departing leave behind us footprints in the sands of time'. It is perhaps singularly appropriate that these are the very words inscribed on the white marble cross

which marks the grave of Sir Morell Mackenzie, the Founder of British Laryngology.

Otorhinolaryngologists have a unique and well-reasoned claim to play a prominent role in today's health care programmes. It is quite unnecessary for me to detail the wide variety of conditions that rest beneath our diagnostic and therapeutic umbrella. Sufficient to say that they include operations requiring considerable dexterity, the usage of modern instrumentation such as the operating microscope, laser or fibre optics, and biotechnological marvels such as the cochlear implant. However, despite a comprehensive period of training the majority of specialists spend the greater part of their professional lives carrying out relatively minor operations and dealing with common maladies. This is reflected in the list of the best attended courses at a recent American Academy of Otorhinolaryngological meeting. The top ten programmes, attracting more than 150 paying delegates, included sinus surgery (five courses), status of T's & A's and – Tympanostomy tubes (two courses), snoring (two courses) and one on Business Management.

Such a selection is hardly surprising since programmes for this meeting are broadly based, with the clear intention of providing North American practitioners with an opportunity for updating their skills relative to their individual practices. A more relevant assessment of the present state of our art might be gained from the 1996 programme of the American Triological Society. This meeting is an amalgamation of a number of prestigious societies, covering both the medical and surgical aspects of the specialty.

In previous years the preponderance of these peer selected papers have been clinically orientated, with an emphasis on surgical and technical developments or extensive clinical experience. Gradually this has changed, and now the basic scientist with a vested interest in clinical problems, plays an increasingly important role in most programmes. This is not to say, however, that longstanding clinical problems have been forgotten. Indeed, many of these topics bear a close similarity to those discussed so fervently in the past . . . and with little additional clarity!

It has now become obvious that the present breadth and complexity of Otorhinolaryngology – Head and Neck Surgery, and indeed most other surgical disciplines, is such that no individual can be expected to acquire expertise in every facet of the specialty. Some degree of partition is inevitable, and this may be based on a personal preference for surgery or specific medical problems such as in neurotology, although such choices may only become apparent with increasing general experience. Sub-specialties develop when there exist a group of individuals with special knowledge and skills in a clearly defined region of interest, such as Paediatric Otolaryngology. Patients will expect particular expertise from these doctors and there is clearly a need for additional formal training. What has become obvious however, is the need for planned Continuing Education (CME) for all, if professional standards are to be maintained.

Of course, as Alan Kerr (President of the BAOL – H&N Surgery) said recently, 'CME is something that has been going on for all of my medical life'. The major difference now is that hopefully it will soon become obligatory for both individuals and their employers, which at the very least will provide opportunities for all to stay 'up to date'. Within the United States, CME has a long and varied history, being formalized in the 1960s. By the late 1970s almost two-thirds of all state licensing boards required some CME for renewal of licence, whilst most of the major specialty societies had implemented mandatory CME for continued membership. This has not only done much to preserve standards within a rapidly changing medical environment, but hopefully will contribute to the ultimate goal of improved patient care.

With the specialty apparently in such a healthy state; well constructed, prepared for an exciting and rewarding future and with continuing professional development an accepted part of normal practice . . . why should I be so concerned for its future existence?

The values to which doctors have clung for many centuries are now being challenged by the rapid advances in medical practice, combined with changes in health care systems and increased patient expectation. A broadly based conference to discuss some of these 'professional virtues' and their relevance to the 21st century was held in November 1994 by the British Medical Association under the heading of 'Core Values for the Medical Profession'. This two-day meeting, attended by representatives from all the major medical institutions, considered a comprehensive agenda relating to the shape and attitudes of a changing society, and the challenges to be faced by the medical profession. Clearly this was but the first step on a lengthy path of debate and consultation, but to me it stressed some of the hazards which our specialty may have to face and surmount, if it is to prosper within the next century.

Those linguists who believe that language and its constituent wordage to be part of a continuous spectrum of evolving behaviour will accept the new vocabulary of the Health Service as an example of natural human evolution. Hospital, patient and doctor have been replaced by such terms as 'provider unit', 'client', and 'health care professional'. Whereas the word client comes from the Latin *cliens* signifying somebody who 'hears and obeys', patient comes from the Latin *pati*, which more realistically signifies 'one who suffers'. What do these new words mean, will they threaten the doctor-patient relationship, and does it really matter?

Traditionally it was the doctor, acting as both professional, craftsman and tradesman who was responsible for the provision of health care. Although retaining responsibility for deciding what to do and the standard of implementation of that advice, the doctor no longer has the responsibility nor authority, for providing the primary facilities. This change in nomenclature therefore underlines

the shift in power to the 'purchaser', whilst leaving responsibility with the practitioner.

Despite its limitations such rationing, which has always been a feature of medical care, should be sensitive to the complexity of medical decisions and substantially depend on the discretion of professionals informed by good practice guidelines, outcome research and other relevant information. As the public become more knowledgeable, and the large purchasers exert their influence, they will increasingly challenge the inconsistencies and flaws in current clinical practice. As patients, people want to be treated in the manner which best improves their health. As taxpayers, they want value for money.

Access to this information may soon become available to all via the Internet. Indeed it has been said that this is 'The greatest breakthrough since fire', or perhaps it is simply just more sophisticated technology? Through this system the public has access to a growing supply of information on health and disease, although it is of varying quality and relevance. There can be no doubt however, that during the next few years the proportion of people accessing this system will grow. Although it has potential benefits for patients there are many inherent disadvantages, not least of which will be the furthering of conflicts between patient expectations of what is available, and those responsible for the provision of health care, with their limited resources. Doctors may be exposed to more frequent legal challenges as patients become aware of the most recent literature and best practice relating to their conditions. Only the establishment of accepted good practice guidelines, based preferably on evidence-based methodology, may offer the doctor adequate protection. It seems clear that the rapidly changing nature of information availability brings with it considerable benefits to all. However, the profession as a whole must appreciate the potential implications of this advancing communication and information technology on the future of their practice, and be prepared.

Before considering our specialty from the viewpoint of purchaser and client, recognition should be given to some of the demographic changes to be faced in Britain in the next century. In 1971, there were 700,000 people over 65 years of age (4.5 per cent population). By 1978, 7.9 million (14.5 per cent population) were over 65 and today the proportion has risen to 18 per cent. It is confidentially predicted that by the year 2030 this will be 30 per cent. Not only are people living longer, but with earlier retirement (or Life After Work, is now the politically correct term), the demand for effective medical rehabilitation is increasing rapidly. This need cannot be ignored, for this is a politically influential group possessing considerable financial resources. However, the penalty for an increased life expectancy is a concomitant increase in degenerative diseases such as sensorineural deafness, neoplasia and many other conditions still seeking effective management. Medical research needs to be aware of this change in

priority, although of course its primary responsibility has been to discover mechanisms of disease and produce new treatments, rather than worry about effectiveness. As a result many new therapies have taken years to gain general acceptance, whilst ineffective treatments have been widely used!!

There can be no doubt that science must be an integral part of the health services, although the benefits are often more obvious to the researchers than to health providers. Technological advances on the other hand, particularly when deepening our understanding of natural phenomena such as the physics of materials, living cells or the introduction of sophisticated instrumentation, are readily welcomed. In 1960 the word 'cyborg' was coined to describe the merging of technology with the human body, originally related to space travel. We now have patients or friends who are 'cyborgs', having had implantation of artificial organs, such as the pacemaker or cochlear implant. However, technology brings much more than hardware, and there may be costs which outweigh its benefits. Concern is now being expressed at the loss of power by the medical profession and the increasing bureaucratic influence on decisions formerly assumed to be the exclusive preserve of doctors. Much of this may relate to medicine's increasing dependency on technology, which makes patient investigation simpler, safer and often yielding more accurate comprehensive information. Technicians are cheaper to employ than doctors, and robots recently described as being efficient stapedectomists, even better value for money.

Although sophisticated basic research is largely the province of professional research workers, consideration must also be given to the potential contribution and importance of research as an integral part of specialist training. Unquestionably, the essential attribute of any surgical consultant is that they should be able to perform operations and other technical manoeuvres to a high standard. However, exposure to the discipline of research certainly contributes to the education of every consultant, and should be encouraged. Fortunately, within our own specialty completion of a thesis is not viewed as obligatory, and although the grasp of research methods and the critical evaluation of data is always a useful experience, peer-reviewed papers probably achieve this objective more rationally. Whether such endeavours materially affect the future of the specialty or benefit patients is quite another matter!! The one group that might have been expected to play an integral part in development is the academic unit. This has never occupied a prominent role in our specialty in this country, although the recent increase in personal titles is greatly welcomed. Academic medical units are in general heterogeneous, with variable sources of often precarious funding. Recent changes in health financing and practice have affected such units more than individual specialists, for much academic money has been generated from clinical practice, research

grants or teaching, whilst costing is often uncompetitive.

Research money, except for high profile topics, is scarce, whilst cessation of tenure makes the dedicated academic career relatively unattractive for the clinician. Although the impact of these changes have been recognized on both sides of the Atlantic, as yet no practical solution has been suggested, and the future of the established adequately staffed academic unit must be in serious jeopardy.

As we approach the next millennium, which after all is but an artifact in the calendar, should we then be concerned that advances in medical and biological sciences, of which our specialty is largely uninvolved, will materially affect clinical practice? The biomedical research community is certainly active with a great deal of unfinished business, particularly in relation to the molecular rules that govern biomedical interactions in life processes, and thus in sickness and health. Sequencing the human genome is only a question of time and money, although it is now uncomfortably clear that genetic engineering has made almost no worthwhile progress towards curing inherited, or any other, disease. Genetic manipulation for cystic fibrosis has scarcely benefited any patients, although genes do appear to have reached at least one per cent of their target cells in a small number of very expensive clinical trials. One of the biggest problems in gene therapy to date appears to be the development of antibodies, and although genetics may eventually produce the medical benefits that have been promised, it is going to be a long and expensive wait. If then there appears to be no immediate threat to the continued existence, or a risk of a dramatic reduction in many of the conditions which provide the justification for the existence of our specialty . . . why my concern?

It has long been acceptable practice when selecting treatment to first understand the underlying pathophysiological process of a disorder and then prescribe drugs or treatment that have been shown to interrupt or otherwise modify this process. Such decisions or actions have been based usually upon the best available evidence. The ascendancy of the randomized clinical trial has heralded a fundamental shift in the way in which such decisions are now taken. The issue today is no longer how little of medical practice is based on firm evidence, but should **any** new therapeutic measures be introduced until randomized trials have shown them to be effective. Many potential problems have been cited to explain the shortage of rigorous surgical trials. Some relate to the difficulty of recruiting patients, others to variation in technical skills and the time taken to measure outcome. Probably the most intractable of the methodological problems is the need to compare new surgical procedures with established and often well-loved techniques. It is hardly surprising that advocates of this 'evidence-based medicine' have not been universally welcomed. Not only does this philosophy interrupt the even tenure of accepted practice, but it brings with it

the intimidating possibility that much of what we do is at the best useless, and at worst, harmful.

However since the public, with just the occasional complaint, appear to have accepted with commendable fortitude this professional ignorance for centuries, who is worrying now? Well today, everybody wants information on clinical outcomes. High quality care should be reflected in good outcomes it is said. Therefore poor outcomes indicate deficiencies in care, including wasted resources. But is outcome data always enlightening? Interpretation is difficult enough for such an unambiguous outcome as death, but in our own specialty, death rates except for cancer patients, are largely inappropriate. Assessment then has to consider such measures as disease status, functional ability or quality of life. These have less than ideal validity, and tend to be assessed unblinded.

Medical audit, the systematic critical analysis of the quality of medical care including procedures used for diagnosis and treatment, use of resources and resulting outcome, is now obligatory. The objectives include improvement of patient care, education, cost-effectiveness and collection of data. Whilst providing a baseline and possibly developing practice guidelines, it fortunately does not at present question established traditions. Apparently nothing is as convincing as personal experience as was illustrated by a Paediatrician in a letter to the *Lancet* last year. When evaluating 34 years of practice in relation to decision taking for possible tonsillectomy, he found that 20 per cent of mothers were determined that their child should have an operation, despite lack of clinical evidence. Their decision was based on the dramatic success of this operation either on themselves or a sibling, and who was to say that they were wrong?

Across the Atlantic however, our colleagues have approached the subject of outcome assessment in their usual highly professional manner. Using the condition of obstructive sleep apnoea as their target, a pilot study has been conducted to evaluate the success of a variety of treatments. A measure of the disease-specific health-related quality of life was obtained by a custom designed patient-orientated severity index, which eventually led to the development of a clinical-severity staging system. The success of this research has led to the instigation of a large scale study, but its real importance lies in the recognition that it is essential that systems are developed which objectively and reliably measure the value to the patient of all of our treatment policies. Nowhere is there a greater need for this than in the management of head and neck cancer. Cancer in general is a common disease and because of changes in age distribution, it will be an important and increasing call upon health services for the foreseeable future. At present there exists considerable variation in the quality of care these patients receive, and this will persist until dedicated specialist cancer centres linked to peripheral units are established. Whilst waiting for the dramatic advances in the technology of cancer care promised by the

revolution in molecular genetics, and we may have to wait for a very long time, patients need informed help, but by whom?

Although surgery plays a prominent role in the multidisciplinary management of most head and neck cancers, the definition of the surgical oncologist remains debatable. To some it is the surgeon who practices exclusively in the field of tumour management, with surgical oncology being the operative management of one or more body systems. To others it is a person who has particular operative skills and knowledge of surgical pathology, and is prepared to embark on what that pre-eminent of all head and neck surgeons, John Conley, would call 'The big cutout'.

However, just as surgery is not merely operating, so surgical oncology is not just treating cancer patients by operations, but rather the total care as part of a multidisciplinary team. The head and neck oncologist will therefore require special training, and because of the anatomical complexities of this region, may come from a variety of clinical backgrounds.

A recent comprehensive review of head and neck services suggests that 20 centres strategically placed would provide an adequate service for present needs within the United Kingdom. As with all other neoplasms, adequate numbers of patients, cared for in a multidisciplinary environment are essential if patients are to receive the best treatment, and there is no place for the 'oncological dabbler'.

Since there is little expectation of any dramatic increase in long term survival rates for most head and neck cancers, the emphasis is now more on quality of life assessment, rather than just five year survival. This is now the standard means of assessing clinical outcome when considered with side effects, complications etc.

Randall Morton, a New Zealand ENT surgeon has recently considered the evolution of quality of life assessment in head and neck cancer. This was in fact carried out under the aegis of the very Foundation which has honoured me today. He concludes that techniques are evolving, due in part to an input from the social scientists. Clinicians need to understand the many implications of this expanding facet of clinical medicine for if survival outcomes can be shown to be comparable, then quality of life and cost may determine treatment strategies.

A hierarchy of decision-making does nothing to diminish the essential dilemmas which face all those who make the decisions when human life and well-being are at stake. Just how do caring oncologists balance the quality of life against uncertain survival? Into this equation now comes the question of cost and value for money. For much of my professional life the main, often only concern, was to offer each

patient the best available treatment for their cancer with no thought of cost. Although appearing morally right at the time, for this was the era of major developments in surgical technique, I am sure that today such a philosophy would be considered unacceptable.

A not dissimilar quandary may now occur within the specialties of both otology and rhinology. Although both have witnessed major improvements in technology within the last decade I suspect that the present cold light of objective realism may find our enthusiasm wanting. A dry ear yes, but return of normal hearing despite imaginative reconstructive surgery, alas no. As for the flavour of the year, functional endoscopic ethmoidal surgery, time will tell!! Personally, I would be reluctant to put all my eggs in that particular leaking basket.

On reflection I wonder if I have perhaps evaded the real essence of the apparently pessimistic title of this lecture. The sensible answer is of course that I really don't know whether the specialty has a future. It has already changed dramatically from the one that you and I have practised, and will certainly continue to do so in the future. Patients with ENT problems will of course continue to require help, but I fear the terms on which this is offered, the circumstances in which it is given and the manner in which success is evaluated, will result in a specialty which is far less enjoyable to practice than it was in my time.

When I gaze into the proverbial crystal ball for a view into the future, all I see is an aging retired professor who was privileged to be part of an exciting specialty at a time of momentous change. The need remains, but in an environment of changing attitudes to health assessment, we may be found wanting.

Of course, most of you may well be unimpressed by much, or indeed all of what I have said, and with the younger members of this audience that would be quite understandable. In this case I leave you with a modification of the words of Milton taken from *Paradise Lost*:

*Perhaps I am . . .
The only righteous one in a World perverse,
And therefore hated . . . for daring single to be just,
And utter odious truth.*

Address for correspondence:
Professor Sir Donald Harrison,
6 Fishers Farm,
Off Limes Avenue,
Horley, Surrey RH6 9DQ.

Fax: 01293 784307