Academic surgery in the UK and the Surgical Research Society 50 years ago

Fifty years ago, in 1970, academic surgical units had finally been established throughout the universities in the UK. Such departments had been created in the Scottish university cities in the 19th century; some medical schools in London had resisted this custom, but by now these bastions of the old system had surrendered!

Harold Ellis[1]

Author details can be found at the end of this article

Correspondence to:
Harold Ellis;
bjhm@markallengroup.com

Academic surgical units had been created in the Scottish university cities in the 19th century, with the most famous incumbent being Joseph Lister in Glasgow and then Edinburgh. Some medical schools in London had long resisted this custom, relying on 'directors of surgical studies', selected from the consultant surgical staff, to supervise the undergraduate teaching of surgery.

A young surgeon who wished to follow an academic career 50 years ago faced a daunting period of training. The Primary Fellowship examination of the Royal College of Surgeons (Primary FRCS) was the first hurdle, and could be taken at any time following qualification. It comprised difficult written articles and oral examinations in anatomy, physiology and surgical pathology, and the pass rate could be as low as 15%. The Final FRCS could then be taken after a minimum of 3 years from qualification. Again, the pass rate, from the candidate's point of view, was depressingly low.

For academic promotion, a higher degree was obligatory, either a Doctor of Medicine or Master of Surgery. These both required a thesis, based on clinical or laboratory studies. The thesis topics might be clinical studies, but more frequently were laboratory based. For example, my own Master of Surgery thesis was a long-term follow up of adult and child patients with fractures of the tibial shaft. It revealed, inter alia, a small group of patients who had suffered undoubted, but at the time unrecognised, Volkmann's ischaemic contracture. My Doctor of Medicine thesis was an experimental study in the rat of the aetiology of postoperative intra-abdominal adhesions.

In addition, the Oxford and Cambridge Masterships had searching clinical examinations, the Oxford examination including operative surgery carried out on a cadaver. Many keen surgeons in training would spend a year abroad in a research centre, the majority in the USA; among themselves, this created the mock qualification of the 'BTA' – the 'Been To America'.

To encourage research, there was the Surgical Research Society, which provided a splendid, if rather intimidating, forum for young researchers, many of them from the academic departments of surgery. Looking through the abstracts of its meetings in the *British Journal of Surgery* gives a good idea of the popular research topics of the time.

Fifty years ago, in January 1970, the Society met in Glasgow. The chairman was the much-revered Professor Andrew Kay, of Glasgow Royal Infirmary, later to be knighted for his service to surgery. The meeting ran over 2 days and comprised a total of 51 papers, the great majority being given, as was the custom, by relatively junior members of the surgical units represented.

To give a flavour of the various surgical research topics of those times, I have chosen a few of the subjects I found of particular interest at the time.

Undoubtedly the highlight was the article by Vijay Kakkar, then a senior lecturer at King's College, London. Up to that time, the diagnosis of postoperative deep vein thrombosis depended on clinical examination. It was well known that this was inaccurate, with a high proportion of false positive and negative diagnoses.

Kakkar now described the use of radioactive iodine-labelled fibrinogen, given intravenously, which is taken up by the fibrin thrombus in the leg and which is detected by using an isotope localisation monitor. Counts from each leg were expressed as the

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percentage of counts taken from over the heart and were read from a simple linear scale meter. In 30 postoperative patients, this simple method, carried out at the bedside, gave similar results to the established time-consuming and invasive methods in use at that time.

This method of detecting deep vein thrombosis paved the way for a cascade of widespread and detailed studies of factors affecting the incidence of deep vein thrombosis and of the efficacy of the various prophylactic measures, such as elastic stockings, leg pumps and low-dose heparin. This presentation heralded the modern era of management of such a common and much-feared complication of surgery. Kakkar was subsequently knighted for his major contributions in this field.

An important article from Professor John Goligher's surgical unit at the General Infirmary at Leeds presented a randomised prospective trial of preoperative antibiotics in patients undergoing large bowel surgery. A group of 128 patients undergoing radical surgery for large bowel cancer were studied. All received preoperative mechanical bowel cleansing. One third received oral phthalylsulfathiazole, one third the same drug plus neomycin and the third received neither. The two antibiotic groups had the same wound infection rate of 23% compared with the markedly higher rate of 40% in the non-antibiotic group. As in the previous studies from the Leeds department, gross faecal loading and wound contamination at operation were associated with a marked increase in postoperative sepsis. Prevention of these last two factors, combined with prophylactic antibiotic cover, is necessary if sepsis is to be avoided in large bowel surgery.

From my own department, at Westminster Medical School, Edward Ashby presented his study on rats which showed that plication of the jejunum delayed gut transit time, with the idea of using this as a means of treating patients with intestinal malabsorption. Ashby showed that plication did indeed delay transit time. In fact, we never used this in clinical practice since we went on to show that a reversed segment of jejunum was more effective, for example, in treating patients with short bowel syndrome following massive bowel resection. Ashby went on to become a consultant surgeon in Chichester.

The rigorous training provided by research, followed by presentations at venues such as the Surgical Research Society, played an important part in the training of our future surgeons 50 years ago, just as it does today.

Author details

[1]King's College London School of Medical Education, London, UK