



A pioneering history: dentistry and the Royal College of Surgeons of Edinburgh

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The Surgeons' Hall, Royal College of Surgeons of Edinburgh, designed by W.H. Playfair

During the 500 years of its history the Royal College of Surgeons of Edinburgh (RCSEd) has been shaped by many internal and external influences, and this has been no less the case with its dental wing. Though a separate Dental Council was not set up until the early 1950s, a number of individual Fellows had promoted the cause of dentistry for some considerable time before then.

Before the Dentists Act of 1878, dentistry was not considered to be a profession, the general view being that it was unregulated, unethical and amateur, with all sorts of individuals offering to pull teeth or advise on cures for toothache or other oral problems. There had been no real attempts to professionalise dentistry, and there were no specific Scottish dental qualifications on offer. A few RCSEd Fellows had turned their attention to dental matters during the second half of the eighteenth century, but largely within the context of general surgery. It would take considerable efforts to persuade both doctors and the public that dentistry had its place alongside medicine, surgery and pharmacy within the spectrum of the increasingly organised and regulated medical profession (particularly so after the Medical Act of 1858), and the RCSEd had a key role to play in this process.

The first evidence of attention to dental matters within the RCSEd comes from the 1770s, when James Rae offered a course of lectures on surgery, including "diseases of the body depending on those of the teeth, thro' all the stages of life ... such particularly as affect the head, eye, glands, and neighbouring parts".

During the early-nineteenth century some of the most famous RCSEd Fellows, such as James Syme and Robert Liston, carried out maxillo-facial procedures, and in 1825 Robert Naysmith worked with Liston in the "splinting of mobile mandibular fragments following resection of part of the jaw for neoplasm."¹ Brodie Imlach, one of only two dentists to become President of the RCSEd, devoted the major part of his practice to dentistry. He was acquainted with James Young Simpson, and maintained a keen interest in anaesthesia. Imlach performed the first extraction of a tooth under chloroform in 1847, only a few days after Simpson had tried it in an obstetric case.



Robert Liston

The key stimulus to the more formal organisation of dentistry within the RCSEd came from John Smith. He was one of the founders of the Edinburgh Dental Dispensary in 1860, and was engaged to provide dental services to the Royal Infirmary in 1863. Smith was president of the RCSEd in 1883-4, and of the British Dental Association, founded in 1879.² Smith was strongly in favour of the licensing of dental practitioners and in 1856 had instituted the first lecture course entirely devoted to diseases of the teeth, stating:

'I am entering on an experiment as yet untried in this place; I therefore do so with less confidence since not having the advantage of a predecessor in the same province ... I am left very much to my own resources in the arrangement and manner of conducting the course'.³

This teaching was, of course, extra-mural, which allowed individuals the freedom to shape their own courses, as there was no specific curriculum or university regulations to provide constraints. In most areas of professional development, a piece of key legislation tends to appear at some point, and in the case of dentistry this took the form of the first Dentists Act in 1878.



Patrick Heron Watson



Dorothy Geddes

Not wasting any time, the RCSEd established its first dental Licentiate examination (LDS RCSEd) in 1879 (in 1895 Lilian Lindsay became the first woman in the United Kingdom to graduate in dentistry, with the Edinburgh LDS).⁴ The Edinburgh Dental Hospital and School was also founded in 1879, and the RCSEd president, Patrick Heron Watson, was ex officio one of its directors, while John Smith was listed as one of the ‘consulting officers’.

In dentistry as elsewhere, publications and societies were important, and Smith made an unsuccessful attempt to establish a dental society in 1865, with the aim of promoting the practice of ‘ethical dentistry’. This initiative failed but the Odonto-Chirurgical Society of Scotland was founded two years later. Members of the Society were banned from advertising, and in keeping with the general perception that learned societies benefited from political support, the first honorary member of the Society was Charles James Fox, elected in 1869.⁵

The Society held regular meetings, and the lecture programme covered a range of topics, including ‘conservative dentistry of exposed pulp’, ‘case of sarcoma of the lower jaw’, and in March 1890 one of the prominent RCSEd members, W. Bowman Macleod, spoke on a very Scottish topic - ‘the effects of bagpipe playing on the teeth’. Scientific progress was closely followed, and members heard papers on ‘nitrous oxide gas’ (1868), ‘inhalation of gas and ether’ (1898) and ‘micro-organisms of the mouth and their relationship with disease’ (1883). Laboratory sciences were by now crucial to progress in all areas of medicine and this was no less true of dentistry.⁶



David S. Middleton

Of key importance also was the hospital setting. Dental staff had been appointed to the Edinburgh Infirmary since 1863, including John Smith, William Guy and David S. Middleton, and there was also, as mentioned, a close link between dentistry and anaesthetics. Several anaesthetists in the post-World War I period were dentally-qualified, and operated dental practices in addition to their duties as anaesthetists. These included John Gibbs, who served in the Infirmary from 1903-1929, and was considered to be the ‘father of oral surgery in Edinburgh’⁷ but who also served as an anaesthetist with the ENT department. D.S. Middleton also combined dental and anaesthetic practices before leading a field ambulance unit in France at the start of the Second World War. The role of the RCSEd in relation to dentistry at this time was thus determined by several interacting influences, including advances in knowledge, the requirements of

legislation, the necessities of war, and the individual enthusiasm of key players, who wished to change the negative image in which their calling was portrayed. As with surgery in general, the RCSEd was both proactive and reactive according to the complexities of the medical spheres and general context in which it operated.



Frederick G. Gibbs

Recognition as a discrete element of the RCSEd structure did not come until the early 1950s, though there was by that time dental representation on the College Council. Consideration was given to the creation of a Dental Faculty, but this would have required expensive alteration to the College Laws, whereas a Dental Council would not, and the decision was taken to set up a Council rather than a Faculty. The first meeting of the Dental Council took place on 26 February 1954, chaired by the RCSEd President, Sir Walter Mercer. Mr F.G. Gibbs was elected as its first convener, and Mr W. Russell Logan was appointed secretary to the Dental Fellows. Representatives were also chosen to serve on the College Library and Museum Committees. The Convener of the Dental Council became an ex-officio member of the President’s Council, and representatives were nominated to serve on various national boards and committees. The Royal College of Physicians and Surgeons of Glasgow established a Dental Council in 1967⁸ and joint meetings

between the Edinburgh and Glasgow dental wings began in 1968. The first female member of the RCSEd Dental Council was the late Professor Dorothy Geddes, who in 1992 became the Dean of the Dental Faculty, and was also the first female Dental Professor in Britain.

Relations between the RCSEd and its Dental Council were not always cordial, though. There were disputes about voting rights of dental Fellows; there was a lukewarm response to the request for a dental section in the RCSEd journal; and considerable disquiet was voiced when the RCSEd expressed the view that Oral Surgery should be the province of higher surgical training, and not higher dental training.⁹ Relations did improve, though, and

in 1982 it was resolved 'that the College shall have a Faculty of Dental Surgery which shall consist of Fellows and Associate Members in Dental Surgery; the Convener of the Dental Council shall be Dean of the Faculty of Dental Surgery *ex officio*'. The Dental Faculty has since that point been organised on very similar lines to the College itself, as well as being an integral part of its structure. Just as the Dental Faculty was established, though, serious implications for the future of dental surgery in Edinburgh arose, with the threat of closure of the Edinburgh Dental School. Plans were drawn up for a new dental hospital and postgraduate institute, but the Dental School closed in June 1994 before these arrangements could be implemented. The Edinburgh Dental Institute eventually opened in late 1998, with responsibilities for postgraduate dental education and training, and involving RCSEd Fellows and Members.

Examinations

As noted above, the first dental examination run by the RCSEd was the Licentiate in Dental Surgery Diploma (LDS RCSEd), established in 1879. In time, and in the light of scientific progress, and, importantly, the development of maxillo-facial surgery and the technology of dentistry, the need for a higher qualification became clear. The Higher Dental Diploma (HDD RCSEd) was established in 1920, attracting considerable numbers of candidates, especially those who wished to follow a career in hospital dentistry. The HDD RCSEd was eventually replaced by a Fellowship qualification, the first diet of the FDS RCSEd taking place in 1949. From 1997 candidates for the FDS sat an intercollegiate first examination, followed by an examination for entrance to the RCSEd to which they wished to adhere. Shortly after the establishment of the FDS, the question of reciprocity of primary examinations arose, and after considerable difficulty this was achieved among the British and Irish colleges of surgeons in 1969.¹⁰ The FDS RCSEd was discontinued in 2002 (the last diet being held in Bahrain), to be replaced by a more flexible examination, based, as are the surgical examinations on a Membership qualification followed by a Specialty Fellowship. The Membership qualification for dental surgery and dentistry (MFDS/MFD RCSEd) is now partly intercollegiate, but the final part is collegiate, allowing specific college affiliation. At the end of higher dental training candidates will take a Specialty Fellowship by assessment, and as with surgery, Membership signifies completion of basic training, and the Specialty Fellowship the culmination of higher training and full competence to practise as a specialist.

The Dental Specialties

A number of factors combined to induce the Dental Council, and later Dental Faculty, to pursue the issue of specialty examinations. These included the advances in Oral and Maxillofacial (OMS) surgery (from the early 1990s OMS surgeons were required to qualify in both medicine and dentistry), the technological advances in areas such as restorative dentistry, orthodontics and paediatric dentistry and, of course, the more general background factors such as the effects of fluoride and the increasing market for cosmetic dental procedures. The technology of dentistry was just as significant as the technology of surgery in acting as stimulus towards new methods of training and new kinds of examinations.

The growing significance of OMS – coupled with the setting up of a specialist unit in the Infirmary and the need for general surgical as well as dental expertise – prompted the Dental Council to approach the RCSEd with a proposal that a Part II FRCSEd examination in OMS be established. A Specialty Advisory Board was created and the first examination took place in January 1985.

There has been a recent proliferation of specialty dental examinations, including:

- Diploma in Restorative Dentistry (1978), superseded by MDS RCSEd in Restorative Dentistry (1993)
- Diploma in Orthodontics (1987), superseded by MDS RCSEd in Orthodontics (1989)
- MDS RCSEd in General Dental Surgery (1990)
- Conjoint MDS RCSEd in Restorative Dentistry with Hong Kong (1996)
- MDS RCSEd in Paediatric Dentistry (1998) MDS RCSEd in Surgical Dentistry (1999)
- MDS RCSEd in Oral Surgery (2000)
- MDS RCSEd in Oral Medicine (2000)
- Diploma in Dental Hygiene (2001)¹¹

Most of these new qualifications have been introduced in the very recent past – perhaps a reflection of the rapid advances in the science and technology of these areas. They are designed to provide proof of competence in a world of much advanced and increasingly technological dental surgery. The general context is, of course, important here, not least the changing proportions in the workload of dental practitioners between treatment of dental caries and prophylactic and orthodontic treatments, particularly in the light of fluoridation, however controversial that might have been, and indeed may still be.¹² Better general dental health has the natural consequence of reshaping the work of dental practitioners.

Just as the RCSEd's surgical examinations have reached many parts of the globe, so the Dental Faculty offers local examination facilities to candidates in Amsterdam, Bahrain, Hong Kong, Chicago, India, Singapore and Egypt. The first RCSEd dental examination in Europe took place in Amsterdam in 1993, and of the worldwide locations, the Chicago centre is perhaps the most interesting, given that it is in the most advanced nation in the world, with its own complex training structures.

The Dental Faculty is nowadays an integral part of the RCSEd, though operating independently through its examinations and training programmes, which include distance learning packages as well as 'hands on' courses and masterclasses. Despite the unfortunate loss of the Dental School, the Dental Faculty appears to be in a healthy state. The long history of the RCSEd has not been forgotten, and in anticipation of its quincentenary in 2005, the Dental Faculty established the King James IV Professorships in 1995. These professorships are offered in open competition to dental practitioners; the successful candidates give a prestigious lecture, and among the topics covered have been 'Intracellular signalling pathways in osteoblasts', 'dentistry and the medically compromised patient', and 'the evolution of extra-cranial carotid artery surgery'.

Conclusion

The relationship between the College and dentistry has been difficult at times, but was influenced primarily by factors common to surgery and to medicine in general as well as to dentistry in particular. In the early days a few College Fellows included dentistry in their surgical work, and as time went on they began to offer some specific teaching in that area. The major stimulus to more formal provision came with the Dentists Act and the need to offer training and examinations which would validate professional dentists and begin the long and difficult process of separating the amateur tooth puller from the professional, well-trained practitioner. In more modern times the examination structure has evolved in the wake of both government requirement and advances in the science and technology of dentistry. In other words, the sphere of College dentistry was contained within, and interacted with, the wider spheres of science, medicine, regulation and legislation. The other British surgical colleges offer similar dental training and qualifications, and examinations are increasingly intercollegiate in nature, so the RCSEd must continue to be pioneering if it is to maintain a key role in the future of dentistry. Its past activities suggest that this can be achieved, though to suggest this would be a postmodernist's worst nightmare.

Notes

1 I am grateful to Dr L.D. Finch and Dr J.F. Gould for providing me with detailed notes on this topic. (Naysmith's brother Alexander gave his name to the eponymous membrane which covers the enamel surface of newly erupted teeth).

2 Keeping things in the family, Smith's son-in-law, William Guy, served as Dean of the Edinburgh Dental Hospital and School in the early years of the twentieth century, and was prominent in the treatment of facial injuries sustained by casualties of the Great War who were treated at the Second Scottish General Hospital at Craighleith.

3 Quoted in *Centenary Brochure* of the Edinburgh Dental School and Royal College of Surgeons Licence in Dental Surgery (Edinburgh, 1979), 1.

4 Lilian Lindsay faced the same sort of problems as did female medical students – being informed by Henry Littlejohn that she was 'taking the bread out of some poor fellow's mouth'. Cohen, R. A., 'Lilian Lindsay 1871-1960, *British Dental Journal* 131 (3) (1971), 122.

5 *Ibid.*, 128-44.

6 Geissler, P. R., *The Royal Odonto-Chirurgical Society of Scotland* (Edinburgh, 1997), 29.

7 Gould, J. F., manuscript notes on development of oral surgery in Edinburgh, 2.

8 Hull and Geyer-Kordesch, *The Shaping of the Medical Profession (Glasgow and Ohio, 1999)*, 207. It acquired Faculty status in 1990.

9 RCSEd, College Minutes, 1 February, 1974.

10 RCSEd, Dental Council Minutes, 14 March 1969.

11 I am grateful to Mrs Violet Brown, RCSEd Dental Faculty administrator, for this information.

12 Craig, G. C., 'Fluorides and the prevention of dental decay: a statement from the Representative Board of the British Dental Association', *British Dental Journal* 188 (12) (2000), 654.

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