BOOK REVIEWS

A surgical revolution. Surgery in Scotland 1837-1901
PF Jones
John Donald 2007
ISBN 859766845 £20.00 p231

Letters from the Crimea. Writing home, a Dundee doctor
D Hill (ed.)
Dundee University Press 2010

Simpson. The turbulent life of a medical pioneer
M McCrae
Birlinn 2011
ISBN 9781780270258 £12.99 p287

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The theme linking the book reviews in Medical Historian issue 21 was the history of epilepsy;¹ the thread linking the current reviews is Scotland in the history of medicine.

During a visit to Aberdeen to lecture at the Royal Infirmary, I chanced upon A surgical revolution. Surgery in Scotland 1837-1901 by Peter Jones, a retired Aberdeen surgeon and medical historian. His book covers the period of Queen Victoria’s reign, 64 years which saw a transformation in the practice of surgery, principally through the advent of anaesthesia and of antisepsis. (Readers of Medical Historian may recollect the harrowing account of surgery before this time documented in Michael Crumplin’s article in Issue 21).² The infrequency of surgical operations before this time (e.g. two per week on average at Aberdeen Royal Infirmary in the early 1840s; p 14) is testament to the hazards involved and the unwillingness of both surgeons and patients to risk the knife in all but the most desperate of circumstances.

The development of anaesthesia in the late 1840s and early 1850s, and the role of James Young Simpson of Edinburgh in the development of chloroform anaesthesia, is carefully contextualised, including the role

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of David Waldie, by then practising in Liverpool. In this discourse I was intrigued to learn of the use of ether by a Dr Scott in Dumfries, even before Liston’s more celebrated public demonstration in London (p 34). Scott apparently learned of the Boston trials of ether from a Dr William Fraser who had witnessed its use, and who travelled on the Acadia which first brought the news of anaesthesia to these shores, docking in Liverpool on 16 December 1846. It is of course well known that the first announcement of Morton’s demonstration of ether in Boston is to be found in the weekly supplement to the Liverpool Mercury of Friday 18 December 1846 (“A method of mitigating pain in surgical operations by inhalation of certain ethers has been discovered in America, and it is said that successful experiments have been made”) and that use of ether had been demonstrated in Liverpool by December 1846-January 1847.4,5

Antisepsis attracts more extensive coverage than anaesthesia, principally because this revolution began north of the border through the work of Joseph Lister, initially in Glasgow and later in Edinburgh. Even before this however, there were surgical “advocates of cleanliness” including Thomas Keith in Edinburgh who became a skilled ovariotomist in the early 1860s. Through his careful recording of all his patients, he is also accorded the distinction of being a forerunner of surgical audit (pp 62-5), as is the unrelated William Keith of Aberdeen who developed the operation of lithotomy for bladder stone (pp 16-23).

Lister’s work is carefully documented, not only antisepsis but also the experimental researches conducted with his wife, Agnes (née Syme, daughter of James Syme, professor of surgery in Edinburgh before Lister). Perhaps no less significant in the development of modern surgery, but less familiar, is Lister’s work in the development of catgut as a suture material (p 95).

Although Lister dominates the book, some other remarkable figures emerge. In Aberdeen, Alexander Ogston did pioneering work in the field of microbiology, wherein he is credited with the first identification of Staphylococcus aureus. As a neurologist, I was inevitably fascinated by Alexander Macewen’s development of neurosurgery in Glasgow, including the credit of being the first to remove an intracranial tumour, an honour sometimes bestowed on Rickman Godlee (incidentally Lister’s nephew and an early biographer).

Well written and handsomely illustrated, many of the images being photographs taken by the author, this book is to be recommended to

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anyone with an interest in the history of surgery. There is, perhaps inevitably, no patient perspective on the experience of surgery, to which end it might have been worth including material from WE Henley’s (1849-1903) collection of poems *In Hospital* (1875; e.g. poem V, *Operation*) reflecting the many months (1873-5) he spent under Lister’s care in Edinburgh Royal Infirmary.

Early in his career, in 1854, Lister was asked to take on the course of lectures due to be delivered by Dr Mackenzie in Edinburgh when the latter succumbed to cholera in the Crimea (p 44), a theatre of war which attracted many medical volunteers, including Spencer Wells, a pioneering ovariotomist who corresponded with Thomas Keith (pp 60-2). Another such civilian volunteer was Dr David Greig (1832-1890), a native of Dundee and an Edinburgh graduate (1853). During his time away (1854-6), Greig corresponded regularly with his family in Dundee, letters which only came to light during a recent house clearance, and which have now been published under the editorship of Douglas Hill.

For many people, the Crimean War is Florence Nightingale, but although Greig travelled to Constantinople on the same vessel as Nightingale, the *Vectis*, and worked for a time at Scutari, she barely surfaces in his narrative. Accounts of Greig’s medical duties feature somewhat less than travelogue, perhaps understandably considering the audience for his letters, but nonetheless he is clear about the origins of the ill health he saw:

> “People at home think we have nothing but sabre cuts and gunshot wounds, but that is a great mistake. Sickness which prevails in the Crimea is far worse than Russian bullets.” (p 34)

> “... our poor men ... are suffering unknown hardships and being extirpated by degrees by sickness and not by wounds.” (p 49)

Indeed, one of Greig’s companions on the outward voyage, Dr Alexander Struthers, died of typhoid fever (pp ix,40,50; cf. vii) within three months of their arrival, as did another friend, Dr Mason. Greig himself then fell ill with typhus (p 62). One can only imagine the anxiety of his family when receiving letters, from another doctor, informing them “that should our dear friend be taken away from us you may not be unprepared for the severe blow” (p 63).

After his recovery, Greig was present at the siege of Sebastopol (sic, in Grieg’s letters) in his role of “Assistant Surgeon”. His work

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involved “trench duty”, 24-hour spells at the Surgeon’s hut every few days to attend to the wounded (e.g. pp 89-90, 107). This might on occasion involve surgery: “I had one amputation at the shoulder joint and another at the forearm” (p 94). Despite his Edinburgh training, Greig makes no mention of chloroform, perhaps a reflection of the notorious policy of Dr John Hall, Principal Medical Officer in the Crimea, who had advised against its use (“for however barbarous it may appear, the smart of the knife is a powerful stimulant; and it is much better to hear a man bawl lustily than to see him sink silently into the grave”), although of course there were those who did use it in this theatre of war.7

On the occasion of the fall of Sebastopol, Greig estimates seeing 2000 patients within 2-3 hours (p 123; at the conservative estimate, that would be 11 patients seen per minute). Trench duty might be avoided by travelling with the wounded, when the field hospitals were full, in ambulance carts to Balaclava (p 93). Perhaps surprisingly, only occasional cases of cholera are mentioned (pp 95, 157). Medical duties also required attendance at floggings, “in case the prisoner turns ill or faint” (pp 84, 142).

Toward the end of 1855, Greig was appointed Pathologist, a member of a pathological board (p 157) and hence exempted from regimental duties. “My duties now are something like a country practitioner ... [I] trot away to whatever regiment requires me to visit it ... I have to write out all my cases and enter them in a great big book” (p 161). With the making of peace and the gradual departure of the regiments, Greig was left with little to do (p 200). He eventually returned home, to set up practice in Dundee where he became surgeon to the Infirmary (although he does not appear in Jones’s book). He died in 1890, following a return visit to Scutari, where he apparently contracted typhoid fever from which he later died (although this is not mentioned in his obituary8).

Greig’s correspondence is a fascinating account of the experience of war at first-hand, with much incidental detail about matters of crucial personal importance (e.g. food, housing, the receipt of letters) which figure little if at all in official histories. This perspective may be at odds with reportage, and Greig is sometimes scathing about what he reads in the newspapers sent to him by his family, including The Times (pp 106,131,152).

One of David Greig’s sponsors for the post in the Crimea was Professor James Young Simpson (1811-1870), presumably one of Greig’s teachers

in Edinburgh (pp 10,13). Morrice McCrae’s biography of Simpson, which appears to be the first scholarly biography devoted to Simpson to be published since the 1970s, examines his many medical interests, most notable of which was his pioneering role in anaesthesia, particularly the discovery of chloroform (David Waldie’s bit part in the story is acknowledged, pp 117-9). Considering the long duration of drug development which is normative today, it is astonishing to consider the rapidity with which chloroform was introduced: first tested by Simpson and his assistants, Matthews Duncan and Keith, on 4 November 1857, Simpson used it in his obstetric practice on 8 November, announced the discovery to the Edinburgh Medico-Chirurgical Society on 10 November, and published observations in the Lancet on 21 November. Such was his consequent renown that he was even mentioned in a review by Dickens published in February 1848 (not cited by McCrae):

Just as Queen Victoria ... bespeaks, towards the happy introduction of another approaching body, the services of ... Professor Simson [sic] of Edinburgh ... 9

The dark side of chloroform (familiar from Stephanie Snow’s work10) is also made apparent from the fact that Simpson’ wife, Jessie (née Grindlay, born Toxteth Park, Liverpool), took to inhaling it (pp 147, 220) and may indeed have died from “chloroform syncope” (pp 232-3).

Simpson’s life was, of course, more than simply chloroform: he maintained a large and lucrative clinical practice as well as his teaching commitments, penned many publications, not only addressing medical but also archaeological questions, and was obviously an important power broker in the vicious (and often libellous) Edinburgh medical scene of the day, James Syme (Lister’s father-in-law) being a particular rival. His writings on cholera, “hospitalism”, and medical reform are all covered at some length. Although based in part on previous biographies, the work has been informed by the author’s reading of Simpson’s extant correspondence held by the Royal College of Surgeons of Edinburgh

Simpson’s role in sponsoring doctors to go to the Crimean War is alluded to (p 178), as is Dr Richard Mackenzie who, unlike David Grieg, did apparently take supplies of chloroform to the Crimea and used them despite Dr Hall’s directives (p 125).

Although not mentioned in the context of the Crimea, “Dr Greig of Dundee” does appear, in January 1860, as one prepared to give a trial to Simpson’s method of acupressure (p 205), designed to staunch intra- and post-operative blood loss and thereby reduce the risk of surgical fever which accounted for so many post-operative deaths during this period. The method, vigorously opposed by Syme, was later superseded entirely by Listerian antisepsis.

The various topics of relevance to Simpson are well contextualised making this a generally satisfying read, with good illustrations. The book is marred only by irritating errors of typography (e.g. Appendix II, p247, has the same title as Appendix I, p 237; a 2004 biography of William Pitt is ascribed to “W Haig”, which should surely be “W Hague”?; there is misordering of works in the Bibliography, pp 272, 273), inconsistencies (an attack on Simpson’s discovery of chloroform is dated to March 1847, p 153, some seven months before the actual discovery on 4 November 1857, p 119), and frank errors, most egregiously the description of Erasmus Darwin as the father, rather than grandfather, of Charles Darwin (p 260n5). Hopefully these shortcomings might be corrected in a revised edition.