Sir James Young Simpson: pioneer of anaesthesia in childbirth

This year is the 150th anniversary of James Young Simpson's death in 1870. As well as being responsible for the introduction of general anaesthesia into obstetric practice, he made other important contributions to obstetrics and also to surgery as well as in the control of hospital infection.

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James Simpson was born on 7 June 1811 in Bathgate, a small town some 15 miles from Edinburgh. He was the seventh son and youngest of the eight children of the village baker. James' mother died when he was 6 years old and he was brought up mainly by his sister. The village school master identified the youngster as being of exceptional promise and his father and brothers devoted themselves to subsidising his education.

At the age of 14 years, Simpson entered the University of Edinburgh as an arts student, but switched to medicine 2 years later. He also attended the popular extramural classes of the outstanding surgeon, Robert Liston, later to be Professor of Surgery at University College London and there, in 1846, to perform the first operation under ether anaesthesia (a mid-thigh amputation of the leg).

In 1830, Simpson qualified licentiate of the Royal College of Surgeons of Edinburgh and obtained his Doctor of Medicine with a thesis on inflammation 2 years later at the age of 21 years. The quality of his thesis led the Professor of Pathology, John Thomson, to appoint Simpson as his assistant.

While teaching pathology, Simpson was appointed as physician to the City Lying-in Hospital and from then on, his practice grew rapidly, both in obstetrics and in general medicine.

Simpson was impressed by Liston's successful use of ether anaesthesia in his surgical practice and in January 1867 he used ether in a labour complicated by a narrow, deformed pelvis. The experiment proved to be a complete success. He now began to use ether routinely in his obstetric work and, indeed, devised his own ether inhaler.

However, ether had its disadvantages, especially that it was inflammable and that large amounts were required during a prolonged labour. It was hard work carrying large heavy bottles of the agent up the many flights of stairs of the Edinburgh tenement buildings.

Simpson and his two assistants began to experiment on themselves by inhaling other volatile fluids. On 4 November 1847, they tried inhaling a sample of chloroform and promptly collapsed unconscious after sniffing a small amount of the drug.

Chloroform was first used on an obstetric case 4 days later and a preliminary report of its efficacy was published, at amazing speed, in *The Lancet* on 20 November. Chloroform was easy to use – simply by pouring a drop of the agent on a piece of gauze or a handkerchief held near the face of the subject each time the patient breathed.

Simpson was attacked for using pain relief for women in labour (by men, of course), as being in some way salutary and also that its use was going against the words of the bible, ('in pain thou shall bring forth children'), even though Simpson pointed out that God had put Adam into a deep sleep to remove the rib required to fashion Eve.

The cause of the use of anaesthesia in childbirth was greatly strengthened when Queen Victoria had chloroform administered to her by John Snow at the birth of her eighth child, in 1853.

Chloroform as an anaesthetic brought well-deserved and international fame to Simpson at the age of 36 years. However, he went on to make other important advances in several fields of medicine. In obstetrics, he refined the design of obstetrical forceps and pioneered the development of the vacuum extractor. Despite his interest in technical aids, his obstetric practice was actually less interventional than many of his colleagues.

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In gynaecological surgery, Simpson was interested in the development of the operation of ovariotomy and of the repair of vaginal fistulae. In operative surgery, he developed the technique of acupressure to control arterial haemorrhage after surgery by using long needles to pin the ends of divided or damaged vessels against the underlying tissues. In 1864, he published *Acupuncture*, a book on the subject, which was a major study of wound healing and of the effects of vascular occlusion. The introduction of Joseph Lister's work on antisepsis shortly afterwards made this study of historical interest only.

Simpson was an inspiring personality, who was not afraid to engage in battle with those of other opinions. He strongly opposed homeopathy, which he regarded as mere quackery. He was a major advocate of the importance of science in medical education and practice. He was a most successful lecturer, teacher and practitioner. He was always willing to attend the poor and often neglected to collect his fee. He supported the cause of foreign students and supported the medical education of women.

In 1866, Simpson received a baronetcy, the first given to a doctor practicing in Scotland.

After suffering angina pectoris for a few months, Simpson died at his home in Edinburgh on 6 May 1870; he was succeeded to the title by his son Walter. Simpson's family declined the offer of a funeral and grave in Westminster Abbey and he was given a public funeral at Warriston Cemetery, Edinburgh. A statue was erected to him in Prince's Street, Edinburgh, and the Simpson Memorial Maternity Hospital was built at the expense of his friends.

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