

Surgery in the Pre-Anaesthetic Era: The Life and Work of Robert Liston

REGINALD MAGEE

The development of anaesthesia allowed the art of surgery to expand its horizons. Until the 1840s, surgical practice was limited to dealing with injuries and disease caused by infection, vascular conditions or malignancy in the superficial tissues or extremities. Although intra-abdominal and intra-thoracic conditions were diagnosed by astute clinical observation and examination, little could be done about them.

Yet some major surgery was done before anaesthesia and one of the greatest exponents of the art was Robert Liston. Born on 28 October 1794, the son of Henry Liston a Scottish minister, he was educated first at Abercorn but received most of his education under the direction of his father. In 1808 he entered the University of Edinburgh and began his medical studies in 1810. Liston was appointed house surgeon to the Royal Infirmary in 1814 and at first worked with Mr George Bell and then with Dr Gillespie. In 1816 he moved to London to work at the London Hospital under Sir William Blizard and Mr Thomas, and then with Mr Abernethy at St Bartholomew's. That same year he was admitted as a member of the Royal College of Surgeons London.¹

1. P. Flemming, 'Robert Liston, the First Professor of Clinical Surgery at U.C.H.', *University College Hospital Magazine*, vol. 11, 1926, pp 176-85.

Returning to Edinburgh a year later, he taught anatomy with his friend James Syme and in 1818 was admitted as a Fellow of the Royal College of Surgeons of Edinburgh. In the following year he and Syme opened a school of anatomy and surgery, subjects they taught with great success for five years. From the first, Liston's bent was towards operating, which he did with great dexterity² due to his knowledge of anatomy and the development of operative skill on the dead body, a practice he alluded to in his textbook *Practical Surgery*.³

Liston gained a reputation as a bold and skilful surgeon because of his success in operating on patients considered inoperable by surgeons at the Royal Infirmary of Edinburgh. Such a case was that of a young man of sixteen with a large tumour over the left scapula, which the surgeons of the Royal Infirmary had dismissed as incurable. Liston decided to operate and, according to the case report, carried out the procedure in a small badly lit room. After tying off the subscapular artery and two other large vessels, he successfully removed the mass, which included three-quarters of the scapula.⁴ From the description of the specimen and the drawing in the article (five cases of aneurysm), it was probably an arterio-venous malformation.

Liston was openly critical of the older surgeons who in return resented the impudence of this young person. At one time he was even accused of soliciting patients, an accusation he vehemently denied. Liston also criticised what he considered to be hospital evils, presumably the dressings and poultices, and so in 1822 was banished from the Edinburgh Infirmary. He did, however, with the assistance of Syme continue his surgical practice by operating in the homes of the patients or in lodgings he provided for them, relying on the relatives for nursing care.

The school of anatomy and surgery continued to prosper, despite the threat that the students may be penalised at the time of their examinations. In 1823, Liston gave up the teaching of anatomy to Syme and after a disagreement they separated, remaining enemies for many years.

2. *ibid.*; D. J. Hauben, 'Robert Liston's Life and Work in the Renaissance of Plastic Surgery', *Ann. Plast. Surg.*, 10, 1983, pp. 502-09.

3. R. Liston, *Practical Surgery* (4th edn), John Churchill, London, 1846.

4. R. Liston, 'Five Cases of Aneurysm', *Ed. Med. & Surg. Journal*, vol. 64, 1820, pp. 66-74.