John Kirkup, the distinguished orthopaedic surgeon and archivist recently published a book describing the history of amputation. This annotation highlights the importance of this work and the particular relevance of many of its themes to current orthopaedic and trauma practice.

In 1963, John Kirkup successfully repaired a femoral artery lacerated by a fractured femur, and it is fitting that a surgeon with such talent has written a volume as outstanding as this. A History of Limb Amputation is a work of scholarship and comes from the pen of an erudite writer. He begins with a review of earlier work. Joseph Lister is given the credit for recognising that Celsus advised amputation through sound tissue with ligature of the vessels, and for introducing antisepsis, which brought about a “bitter schism”. The requirement for speed, drawn from the days before anaesthetic, is related. Even “as late as 1960, the author, then an apprentice surgeon, was reprimanded for lack of speed during an amputation; today a meticulous approach is demanded”. Kirkup analyses the long-standing reluctance in surgeons and patients alike to dismember the human body, a reluctance which prevails to this day. His reference to the Spartan practice of throwing crippled or weak new-born babies into a deep pit on Mount Taygetus evokes a chilling resonance in these days of debate about aborting a fetus with congenital abnormality. Equally disturbing is a discussion about punitive and iatrogenic amputations. One unfortunate patient describes how his hand and foot were amputated by seven doctors as a punishment by the Taliban in Afghanistan. On the subject of ritual amputation of fingers, Kirkup writes that it is “practised by many communities on a worldwide scale”, and notes that it is a process in which “the female is predominantly the loser”.

Subsequent chapters describe the progress in technique. Kirkup gives Fabre the credit for implementing a policy of incisions through healthy tissues in the 16th Century. There are poignant references to informed consent, “if you be constrained to use your Saw, let first your patient be well informed of the eminent danger of death by the use thereof; proscribe him no certainty of life, and let the work bee done with owne free will, and request; and not otherwise. Let him prepare his soule as a ready sacrifice to the Lord by earnest praiers, craving mercie and help unfainedly...... It is no small presumption to Dismember the Image of God”. Attempts to reduce sepsis saw an improvement in instruments and the development of the tourniquet. Kirkup comments, “in this context, a much earlier report, by Crowther in 1802, of the healing of 28 consecutive compound fractures without an amputation is astounding”. Most of these patients had suffered industrial accidents and Crowther used dressing impregnated with wood tar, which contains creosol, phenol and other antiseptics in their treatment. Kirkup reminds us of the real meaning of debridement, as practised by Larrey and expounded by Bell. It is to unbridle, to lay open, to decompress. Pain caused by continuing irritation of a nerve (neurostenalgia) is exemplified by Lord Nelson who suffered constant pain within the stump after his right arm was amputated during the Battle of Santa Cruz at de Tenerife in 1797. Years afterwards, the pain was suddenly relieved when the ligature round the median nerve came loose and was discharged through the wound.

The first comprehensive record of war casualties was prepared by the Union Army during the American Civil War. It revealed a shocking rate of mortality following amputation. This remained a problem in Flanders during the Great War until Robert Jones implemented splintage of the limb leaving associated wounds open. Court-martials were reserved for those who disobeyed his technique.
The work draws to a close by showing how modern techniques and instruments have evolved and there is a particularly fine contribution from Kingsley Robinson about prostheses and rehabilitation.

One theme running through this work is that modern surgery has been driven by the impetus of war. It is remarkable that the enlightened military surgeons, whose work was drawn together by the Special Committees of the Medical Research Council in World Wars I and II, advanced understanding only for many of their civilian colleagues to then forget or dismiss their findings. The treatment given to our injured servicemen and women at the Selly Oak Hospital (previously the Birmingham Accident Hospital) and at the Services Rehabilitation Centre at Headley Court is scarcely matched by much current civil practice.

I felt a growing sense of disquiet whilst reading this work. How would Kirkup get on with clinical governance when he set out “to repair rupture of femoral artery”, for that matter how would Lister get on with that process and with NICE? Surgeons and anaesthetists, who think it reasonable to delay treatment of wounds and fractures, might reflect on Ambrose Paré’s experience. In agony from an open fracture of the ankle, he begged urgent treatment from a fellow surgeon, “that he would stretch my foot straight out, and if the wound was not sufficiently wide, that he would enlarge it with his incision knife, so that he might more easily set the bones in their due place”. It is too easy to blame management for some cases of quite shocking and callous disregard for patients’ complaints of pain, which signal ischaemic necrosis. We are seeing too many of these cases.

Perhaps the most elevating theme in Kirkup’s book is the strength of the human spirit, for so many cases of amputation are related without any form of anaesthetic, in which the patient exhibited extraordinary calm and patience.

This book is extensively illustrated, there are close to 800 references and Kirkup pays a handsome tribute to the staff of the Library of the Royal College of Surgeons of England. In short this book should be bought and read by all aspirants to medicine. Law Lords and NHS managers would also come to no harm from reading it. They might even learn something.

No benefits in any form have been received or will be received from a commercial party related directly or indirectly to the subject of this article.

References