

Book Reviews

Under the Knife: The history of surgery in 28 remarkable operations. Arnold van de Laar. John Murray, London, 2018. 357pp, ₹ 1260. ISBN 9781250200105 (HB), 9781250200099 (eBook).



A considerable amount of ground on the history of surgery has been covered in the introduction itself. Towards the end of the introduction, the author introduces us to the persona of the average surgeon who conceals his doubts behind an air of self-confidence. When—as happens rarely—his patient dies after surgery, the surgeon’s morale is shattered but the spirit encapsulated in the title of the song by the British rock band Queen, ‘the show must go on’, also brings back a degree of equanimity as the surgeon braces himself to see his next patient.

As the title suggests, there are 28 chapters, each describing a landmark operation. We are reminded of Ambroise Paré’s discovery in the 16th century that the traditional method for treating bleeding wounds on the battlefield by pouring boiling oil into them was unnecessarily painful and less effective than a salve made of eggs, oil of roses and turpentine. The author calls it the first step towards modern surgery.

In turn, the origin of the words *surgery* (from the Greek term for the hand) and *chirurgeons*, its practitioners (*kheir*: hand; *ergon*: work) is explained. The knife became part of the surgeon’s equipment once the principle *ubi pus, ibi evacua* (where there is

pus, let it out) was generally followed. In prehistoric times, the surgeon's chief tasks may have been the letting out of pus, repair of wounds and the setting of fractures.

Making wounds to treat the patient came much later. While physicians restored health, surgeons healed (made whole). The use of the surgical mask dates back to Johann von Mikulicz-Radecki (1850–1905) of Breslau, who described in 1897 the use of layers of gauze to cover his mouth as he operated, to prevent germs in minuscule drops of saliva (expelled as he described the steps of his operation to his students) from contaminating the wound. (William Stewart Halsted's reason for devising rubber gloves for use in surgery—which had nothing to do with asepsis—is not described in this book though his gloves are referred to on three occasions.)

The preparations for a difficult operation being performed for the first time may, at times, resemble those made by Charles-François Felix de Tassy when he was asked by King Louis XIV of France to cut open his anal fistula in 1686. Tassy operated on 75 other patients with such fistulae before daring to try it on the king!

Le Grand Opération on Louis XIV is described in chapter 27. Among the interesting facts we learn about the Sun King is that the incensed husband of a woman who was sleeping with the king visited a brothel with the sole intent of contracting syphilis which he could pass on to the king through his own wife. The husband did not achieve his goal.

You will remember this king also for his statement, *L'état, c'est moi* (I am the state), a sentiment also later shared by President Charles de Gaulle. Louis also changed forever the position in which mothers delivered babies. Eager to see the birth of his bastard child by Louise de la Vallière, he commanded abandonment of the prevalent practice of delivery squatting on haunches and, instead, made her lie on her back with thighs wide apart. There are several interesting anecdotes on the king, including the manner in which he developed his fistula.

Incidentally, although not referred to in this book, personal hygiene at this time was almost non-existent. The Church had prohibited public bathing as it led to immorality, promiscuous sex and disease. Physicians taught that water carried disease into the body through the skin.

King Louis XIV is said to have bathed only twice in his lifetime.

Despite the powdered wigs, the heavy perfumes and the sachets of scented herbs concealed in clothing, the royal presence in the Palace of Versailles could often be smelt before it was observed.

Chapter 3 deals with a royal prepuce—that of King Louis XVI. When his attractive consort, Marie-Antoinette, failed to show evidence of pregnancy years after their marriage, anxiety at the court and ribald gossip in public made medical evaluation necessary. I shall leave you to learn more on the cause and successful treatment from the book.

If Louis XIV changed forever the position in which women deliver their babies, Queen Victoria brought in an acceptance of anaesthesia to prevent the insufferable pain of the 'animalistic' experience of giving birth. The 'indescribable trauma' of bringing forth seven children (each followed by postpartum depression), she was very apprehensive in 1853 when she was pregnant again. The old objections against anaesthesia were never raised after she described delivery under the effects of chloroform as 'blessed, soothing and delightful beyond measure...' Read Chapter 10 for Dr Snow's detailed account of how she was anaesthetized and the trials and tribulations that preceded the use of ether and chloroform in medicine and surgery. Van der Laar reminds us that Dr Snow

is not remembered as much for his anaesthesia as for the manner in which he stopped the spread of cholera in London by the closure of the water pump on Broad Street in Soho. In doing so, he gave rise to the science of epidemiology.

Chapter 1 deals with an operation of desperation performed in the author's own city—Amsterdam. Jan de Doot, a blacksmith, suffered agonies from an enlarging stone in his urinary bladder. By 1651, he had already undergone two unsuccessful operations for its removal through the perineal route. As strangury and recurrent bladder infections worsened, he decided to literally take matters into his own hands and removed the stone from the bladder through a new perineal incision made by him. Doot survived the operation and Carel van Sarvoven portrayed him in the late 1650s with the stone in his left hand and the knife used to make the cuts in his right.

Those interested in the nervous system will find Chapter 25 of special interest. Here we learn that a simple peasant had once predicted to Vladimir Ilyich Uljanov (better known as Lenin) that he would die of a stroke. When queried, he provided the basis for his conclusion: 'It's that terribly short neck of yours.' Lenin recounted this at the age of 52, when he was recovering from his second stroke. Ivan Pavlov, Professor George Klemperer and other medical experts called in to treat the Russian dictator provided a variety of diagnoses. Details on the secrecy that surrounded his first stroke in 1922, the role of the bullet near the left carotid artery (from a failed attempt at assassinating him), the suspicion of syphilis (the Wasserman test was negative) make interesting reading. He died after his fourth stroke in 1924. Surprisingly, no mention is made of the German couple—Oscar and Cecile Vogt—who studied Lenin's brain, or of their findings.

In the days before the use of anaesthesia, the struggling and apprehensive patient had to be held down by able-bodied assistants and time was of the essence for the surgeon. We are told that in the early 19th century, Robert Liston was famed as the fastest knife in the West End of London. Accidents did occur as when, during an operation, Liston cut off a patient's testicles while amputating his lower limb at the thigh. At another operation, he had the dubious distinction of 300% mortality. His knife slipped and accidentally cut off his assistant's fingers. Profuse bleeding from the patient and the assistant so shocked an observer in the theatre that he dropped dead. Patient and the injured assistant later developed gangrene and died (p. 262).

Van de Laar also provides data on women surgeons in bygone centuries. Around the year 1000, Albucasis of Cordoba recommended that women with stone in the urinary bladder should undergo surgery by a female surgeon. Twelfth century French books and journals refer to the skills of female surgeons. A widow of a surgeon in France was permitted to take over the surgical practice of her late husband. Women were trained as surgeons in 13th century Italy. In the next century, of the 3000 surgeons graduating from Salerno (south-west Italy), 18 were women.

Other *curiosa et exotica* in the book include Harry Houdini's final performance even as his inflamed appendix was rupturing (Chapter 9), the use of a glowing wire to illuminate findings during cystoscopy 6 months before Thomas Alva Edison invented the light bulb (Chapter 17), Rudolf Nissen's successful operation upon Albert Einstein's abdominal aneurysm (Chapter 16) and the technique for removing a tumour from an electric eel that can generate a charge of 600 volts when threatened (Chapter 28).

Personalities of our time—King Edward VIII; Boris Yeltsin; Mohammed Reza Pahlavi, deposed Shah of Iran; King Hussein of

Jordan; Aristotle Onassis; American Presidents Lyndon Johnson and Richard Nixon are dealt with in Chapter 13. President John F. Kennedy's story is told in Chapter 2 and that of Lee Harvey Oswald—who shot the President—is to be found in Chapter 23.

A bibliography and an index bring the book to a close.

Surgeons will find this book fascinating. The many anecdotes, simple language and 17-page glossary will make it interesting reading for other medical professionals and lay persons as well.

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