

## State of the art urology 100 years ago

One hundred years ago, on 27 May 1920, the inaugural meeting of the Section of Urology was held at the Royal Society of Medicine in London. The lecture, by Sir Peter Freyer KCB, paints a vivid picture of the state of art of urological surgery a century ago.

The speaker at the inaugural meeting of the Royal Society of Medicine's Section of Urology was the Section's first President, Sir Peter Freyer KCB (Knight Commander of the Bath) and the title of his address was 'Modern progress in urinary surgery'. In his introduction, Freyer proposed to review the advances he had witnessed from the beginning of his career in urology, when he had first qualified in medicine 45 years previously in 1875 (at a time when the cystoscope, the urethroscope and X-rays were all unknown), up to the present time. The lecture paints a vivid picture of the state of art of urological surgery a century ago.

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### Retention of urine

In the 1870s, the common condition of retention of urine was managed by hot baths. If this was unsuccessful, this was followed by catheterisation, usually using catheters made of gum elastic, and then by 'the catheter life' – the patient being taught self-catheterisation. (In passing, as a very young surgeon, I met a very old surgeon who had paid his way through medical school by living in the home of a wealthy old prostatic gentleman and catheterising him twice daily, once before and once after attending medical school.)

If catheterisation failed, there were three rival methods of management:

1. Suprapubic puncture of the bladder and insertion of a suprapubic catheter
2. Puncture of the bladder per rectum above the prostate, using a similar instrument
3. Edward Cock's technique of tapping the bladder above the prostate by plunging a long and slender scalpel through the perineum along with a guiding finger in the rectum to localise the prostate.

All were frequently followed by serious consequences and were now replaced by temporary insertion of a suprapubic catheter until the cause of the retention could be defined and dealt with.

### Bladder stones

Freyer noted that when he first went to India as a medical officer in the Indian Medical Service, vesical calculi were usually treated by the classical operation of lateral perineal lithotomy. Now, using the stone-crushing instrument, the lithotrite, passed per urethram, has become the operation of choice, combined with washing out the fragments of stone via a large metal catheter. Suprapubic removal of the stone is reserved for large calculi that cannot be accommodated between the jaws of the lithotrite or where an enlarged prostate requires removal at the same time. Sir Peter noted that he had removed, to date, bladder stones in 2119 patients by all methods of treatment.

### Renal surgery

Freyer noted that kidney surgery was unknown in his early days of surgery. However, the use of X-rays enabled renal stones to be visualised and nephrolithotomy by the loin route was now being performed successfully. Similarly, ureteric stones, if impacted, were now being removed by extraperitoneal uretero-lithotomy.

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## Prostatic hypertrophy

William Bellfield, of Cook County Hospital, Chicago, performed the first planned suprapubic removal of the prostate when he described avulsing a pedunculated middle lobe by this approach in 1886. The following year, Arthur McGill, at the Leeds General Infirmary, reported success in three similar cases and by 1890 recorded 33 such operations. In 1895, Eugene Fuller of New York published a series of six such cases. Despite the work of these three pioneers, it was undoubtedly Freyer who popularised the operation. He describes his work in this lecture. In December 1900, he performed the first of what he described as ‘total enucleation of the prostate’, which he published in the *British Medical Journal* in July 1901. By the time of his Presidential lecture, Freyer had performed 1674 cases of this operation and writes ‘I believe, I may say, that this operation is now almost universally practised by surgeons’.

Freyer claimed, and stressed in his lecture, that he, and only he, had introduced total removal of the gland and its capsule from its adventitial sheath. We now know, of course, that Freyer (and others) were removing the (often quite massive) adenomatous masses of hypertrophic prostatic tissue, leaving behind a ‘capsule’ which is, in fact, highly compressed normal prostatic tissue. The surgical journals of the time were filled with acrimonious claims and counter-claims of Treves vs Fuller and the Leeds group. The answer was, of course, that Freyer was wrong and the secret of Freyer’s success was his meticulous technique, coupled with his use of a large suprapubic tube drain to enable free drainage of any bladder clots.

As a young house surgeon in 1948 at the old Radcliffe Infirmary, I assisted my chief at a number of ‘Freyer prostatectomies’. The patients all survived the surgery, but would often spend some weeks in hospital while their suprapubic urinary fistulae slowly healed. It remained for Terence Millin to devise the retropubic operation, carried out through the prostatic capsule, which he introduced in 1945 and which I performed for many years. Today, of course, the use of fiberoptic endoscopic instruments has all but replaced open prostatectomy for benign disease.

As you might imagine, Freyer was a colourful character. He qualified in Belfast in 1874 with a gold medal, served in the Indian Medical Service, attaining the rank of colonel and became especially skilled in the use of the lithotrite. After successfully operating with this instrument on the Rajah of Rampur, he was rewarded with a lakh (100 000 rupees) and a magnificent gift of jewellery. On returning to England, he was appointed to St. Peter’s Hospital in London (now The Institute of Urology). He was an excellent and speedy surgeon and developed a large private practice. In 1920, he reported a series of 1625 prostatectomies with a remarkably low mortality, for those days, of only 5%.

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