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## **SURGEONS IN KAY'S PORTRAITS**

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### **Abstract**

This paper describes four Scottish surgeons depicted by John Kay, a famous Edinburgh caricaturist active during the Scottish Enlightenment. It gives the reader some interesting insights into the life, work and culture, of surgeons in 18<sup>th</sup> century Scotland.

Key words: Scottish surgery, history of medicine, John Kay, caricatures, Scottish Enlightenment

## Introduction

John Kay (1742–1826) was an Edinburgh barber (Figure 1) whose shop in the heart of the Old Town gave him a window on the world of Scotland’s capital during the later years of the Scottish Enlightenment. A skilled caricaturist, Kay sketched many of Edinburgh’s characters, from the famous and distinguished to the ordinary citizens, often selecting those with an eccentricity or interesting story [1]. This article describes four Edinburgh surgeons depicted in Kay’s Portraits [2].

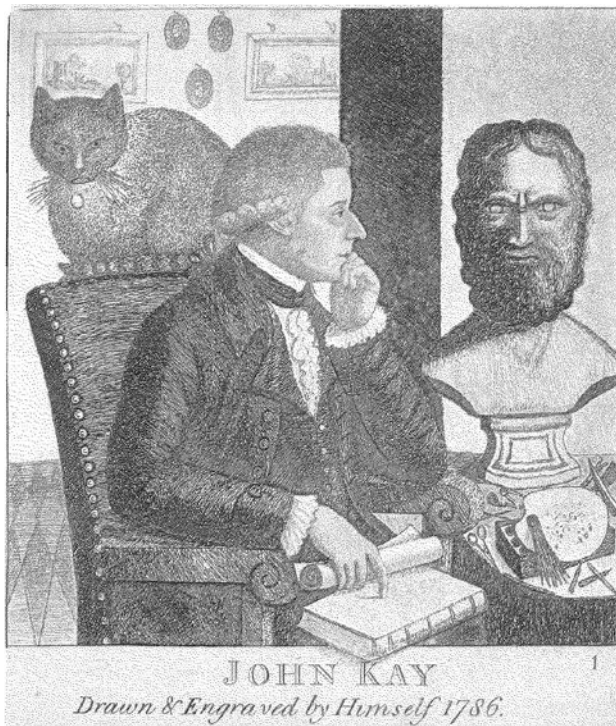


Figure 1. Self portrait of John Kay, 1786 [2:IX].

## Four surgeons in Kay’s Portraits

*Benjamin Bell (1749–1806)* [3–5]

In 1770 Benjamin Bell was elected a Freeman (Fellow) of the Incorporation (later Royal College) of Surgeons of Edinburgh. He gained further experience in Paris then in London where he studied under John Hunter and Percivall Pott. At the remarkably early age of 24 he was elected one of four surgeons to the Royal Infirmary of Edinburgh. These were usually short term appointments but Bell remained in this post for some 25 years. He was an avid reader of surgical

publications from around the world and has been described as “[...] an outstanding figure in the surgical world of his time” [4:53] or “the first of a new breed of scientific surgeons” [6:118]. He was the major surgical figure of the Scottish Enlightenment (Figure 2).



Figure 2. Benjamin Bell from Kay's Portraits [2].

In 1775 Bell fell from horseback and sustained injuries that were to force him to take a break from surgical practice for two years. During this time he wrote his famous textbook *A System of Surgery* having read the contemporary surgical literature widely in order to incorporate current ideas and experience into the book. He then became a partner in the most successful surgical practice in Scotland. One of his surgical colleagues John Campbell went so far as to boast of his partner that “[...] at one time nobody could die contented without having consulted Benjamin Bell” [5: 52] (Figure 3).

Bell's magnum opus *A System of Surgery* attempted to bring together the art of surgery in “broad and orderly form” [7]. It also aimed to “[...] exhibit a view of the art of surgery as it is at present practised by the most expert surgeons in Europe” [4: 59]. The book undoubtedly had failings. No personal results are quoted, his account of results of operations like amputation is vague, his only illustrations are of instruments, in marked contrast to the superbly illustrated works of his contemporary Edinburgh surgeons John and Charles Bell. Yet for all that it was clearly written, comprehensive and included analysis of published work from around the world. It became a bestseller running to seven English editions, and it went on to Italian, French, Spanish, German and three American editions.



Figure 3. Portrait of Benjamin Bell by Sir Henry Raeburn, circa 1790 [15].

### Head injury

Before Bell, surgeons had viewed head injury as the treatment of skull fractures. Bell described the management of brain injury, giving detailed clinical features of concussion and intracranial haemorrhage, a classification of skull fractures, as well as the treatment of skull fractures causing cerebral compression. Bell describes the mechanism and features of contrecoup brain injury. He stressed the need to be aware of the “lucid interval” which can occur between injury and onset of neurological features. Trepanation in head injury, he advised, should be based on neurological examination rather than performed prophylactically.

### Syphilis

Bell wrote several important treatises including his *Treatise on the theory and management of ulcers* which he dedicated to Percivall Pott. *A Treatise on Gonorrhoea virulenta and Lues venerea* (syphilis) published in two volumes was translated into Italian, Spanish, and French. Here he refuted the traditional view, endorsed by the great John Hunter, that gonorrhoea and syphilis were one venereal disease. Bell had never seen a patient with syphilis develop gonorrhoea or vice versa. Moreover, syphilis could be contracted by attending doctors from lesions on their patients but gonorrhoea never was. Bell popularised some important areas of surgical management.

### Pain relief

He advocated that the limb should be numbed by nerve compression prior to amputation a technique described by James Moore, a young Scottish surgeon who is widely promoted in the *System...* Bell was also an early advocate of the routine use of opium preparations for pain relief during and after surgery. He wrote: "In general they [opiates] prove most useful when given immediately after, when they very commonly alleviate that pungent soreness of which patients at this time usually complain; and by continuing to give them in adequate doses from time to time, we are often enabled to keep the patient easy and comfortable [...]" [8: 250].

### Saving skin

"Save skin" is an adage that has come to be associated with Bell and is, indeed, repeated constantly in his works. It is particularly relevant in amputation, about which Bell wrote extensively. In amputation he recommends cutting two large skin flaps, then making the incision in the muscles at a higher level and dividing the bone at an even higher level. In this way there is less tension on the suture line, promoting wound healing. It was not original but widely promoted in the *System...* so Bell must be given credit for popularising the technique.

### Mastectomy

Bell recommended that "even when only a small portion of the breast is diseased, the whole mamma should be removed. The axillary glands should be dissected by opening up the armpit" [9: 413]. This was accompanied by his usual advice to "save skin". While this was to become accepted practice over the next two centuries, Bell was not the first to suggest it but helped popularise it.

Benjamin Bell was not really a scientific surgeon, in the way that John Hunter was. He was not an experimenter, a collector, nor was he an innovator. He did not describe new disease entities and did not record patient numbers. It is clear that Bell was well read and had a detailed knowledge of current published surgical work from around Europe.

His great contribution was his *System of Surgery*, widely read and hugely influential. It was a comprehensive, systematic, authoritative, readable surgical text, it was the first such account in the late eighteenth century.

This was made possible by a career break resulting from injury, supported by a background of modest wealth, which allowed him time for reading, reflection and writing. An outstanding publisher ensured the wide dissemination of his *System...* and proud descendants, in particular his grandson, also named Benjamin Bell, undoubtedly helped promote his reputation (Figure 4).

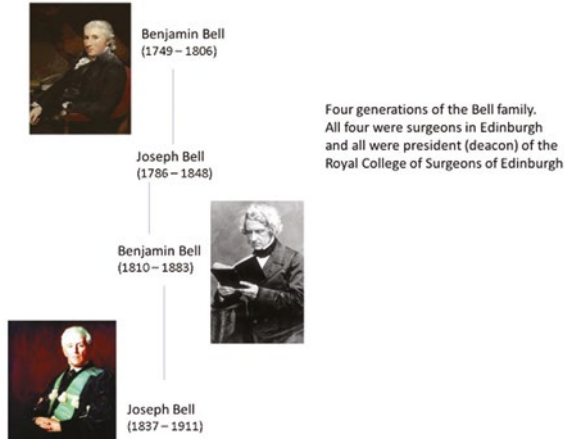


Figure 4. The Bell family tree. Chart compiled by author.

In a nepotistic tradition reminiscent of the Monro dynasty, Bell’s son, grandson and great-grandson were all Edinburgh surgeons, were all presidents of the Royal College of Surgeons of Edinburgh and all, in different ways, promoted their forebear. His great-grandson Joseph Bell taught a young Edinburgh medical student called Arthur Conan Doyle who made Joseph Bell the model for the great fictional detective Sherlock Holmes [3].

*John Bennet (1740–1805)*

John Bennet made no known lasting contributions to surgery, but his story offers us insights into the life of an 18<sup>th</sup> century gentleman-surgeon at a time when military service, wagers and practical jokes were all common features of their lifestyle (Figure 5).



Figure 5. John Bennet from Kay’s Portraits [2].

Bennet was the son of an Edinburgh brewer. After studying medicine at the University of Edinburgh he was appointed Surgeon to the Sutherland Fencibles, an auxiliary army regiment raised for home defence which, like many of its kind, enjoyed a short existence and was disbanded in 1799. Returning to Edinburgh he went into a surgical partnership with James Law of Elvingston.

Bennet was appointed Surgeon to the Garrison of Edinburgh Castle in 1791 and was President of the Royal College of Surgeons of Edinburgh from 1802 to 1804. Two years later he was given an honorary commission into the Loyal Edinburgh Spersmen, another volunteer regiment in which he held the rank of Lieutenant Colonel.

Bennet's reputation was enhanced by a public demonstration of his surgical skill. A group of merchants, after what Kay describes as "a fit of hard drinking" were feigning a fight with a knife when the blade accidentally incised the throat of a Mr James Dempster, a jeweller in Parliament Square. The wielder of the knife, a Mr Hamilton, summoned John Bennet who immediately stopped the haemorrhage, closed the wound and Dempster survived. Hamilton, to show his gratitude, presented John Bennet with "an elegant chariot" (Figure 6).



Figure 6. John Bennett by J. Jenkins [16].

Another insight into his life and times is in what Kay rather disapprovingly called "an unprofessional frolic". On one occasion, Bennet had lost a bet, the wager being "dinner and drinks". When he lost the wager, he duly entertained the victor to dinner and drinks in what Kay describes as "a house of good cheer" in Leith, but arranging their transport there in funeral coaches, which drove slowly through the streets of Edinburgh and Leith at a funereal pace to the embarrassment of their occupants [2].

Bennet died suddenly during a day's excursion to the kingdom of Fife. Having crossed on the ferry at Queensferry he was noted to be in high spirits but was found dead later that day with a fatal shotgun wound, his gun dog beside his body [10].

*James Rae (1716–1791)*

Much of the credit for the introduction of formal teaching in the 18<sup>th</sup> century belongs to James Rae, who established systematic clinical teaching of the patients under his care and gave the first planned course of lectures in surgery in Edinburgh.

James Rae became an apprentice surgeon in Edinburgh and in 1747 he passed the five examinations to become a Freeman (Fellow) of the Incorporation of Surgeons of Edinburgh. He served as the Incorporation as Librarian and Treasurer and in 1764 he was elected Deacon (President). In 1766 he was appointed surgeon to the Royal Infirmary of Edinburgh (Figure 7).



Figure 7. James Rae from Kay's Portraits [2].

It was at this time that he began regular clinical teaching on the patients under his care and gave a lecture course on surgery in Surgeons' Hall, where the Incorporation was based. This clinical teaching and lecture course was well received and in 1776 the Incorporation suggested that a Chair of Surgery be established in the University. This proposal was blocked by Alexander Monro *secundus* who successfully suggested that his Chair should be renamed the Chair of Anatomy and Surgery, despite the fact that he, himself, was not a surgeon [11].



Despite this setback James Rae continued with his successful teaching courses and established a large practice, specialising in dental surgery. His elder son William Rae, also a Freeman of the Incorporation, established himself in practice in London, and, following his father's example, began to give lectures on dental surgery in John Hunter's house in 1785 [12,13].

*Alexander Wood (1725–1807) [2: 161;10,14]*

Alexander Wood was a well known and popular figure in 18<sup>th</sup> century Edinburgh. A competent surgeon rather than an innovative or academic one, he is remembered for his conviviality and his leading role in the clubs and societies which were such a prominent feature of the Enlightenment.

Because of his tall, lanky stature, he was better known to his contemporaries and to posterity as “Lang Sandy” Wood (Figure 8).



Figure 8. Alexander Wood from Kay's Portraits, carrying his pioneering umbrella [2].

He became a Freeman of the Incorporation of Surgeons in 1756 and rapidly gained a reputation as a skilled and safe operator. Having built up a large surgical practice and been appointed to the staff of the Royal Infirmary of Edinburgh, he was elected Deacon (President) of the Incorporation in 1762. By this time, he had become a familiar and universally popular figure in Edinburgh, not because of any contributions to the advancement of surgical knowledge because of his eccentric character and personality.

Two of his pupils typified the high regard in which he was held. The surgeon John Bell (1763–1820) dedicated his book *Anatomy of the Human Body* to him and Sir Alexander Morison (1779–1866), the pioneer of psychiatric medicine, composed a poem in his honour (Figure 9).

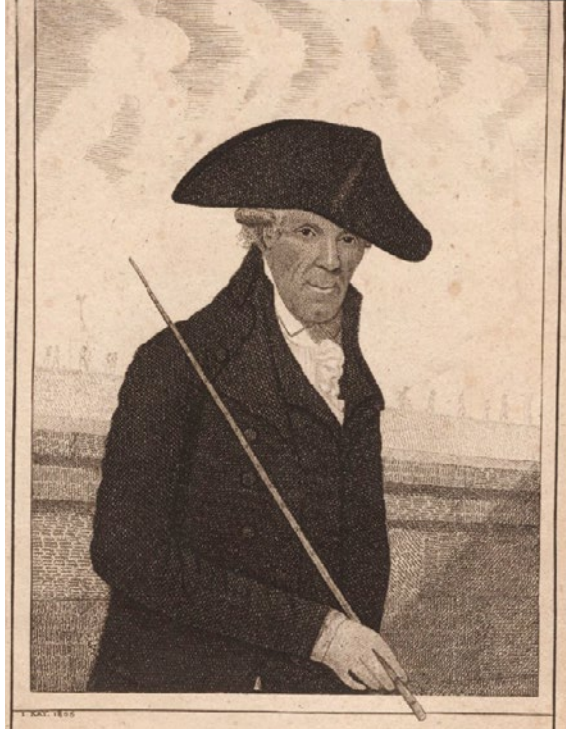


Figure 9. Alexander Wood by John Kay, after portrait by Sir Henry Raeburn [2].

He was a genial extrovert whose affability, bonhomie and kindness enriched the Edinburgh social scene. “Lang Sandy” was an enthusiastic supporter of many dining clubs and convivial societies and a founder member of two medico-social fraternities which flourish in Edinburgh to this day – the Aesculapian Club and the Harveian Society.

In an age when personal idiosyncrasy was often deliberately cultivated, Sandy Wood stood out as one of the most idiosyncratic. Wherever he went, including domiciliary visits to his patients, he was accompanied by his two pets – Willie, a tame sheep which trotted along beside him and a raven which would perch on his shoulder, when he passed a favourite bar. He was also the first person in Edinburgh to own and use an umbrella (Figure 10).

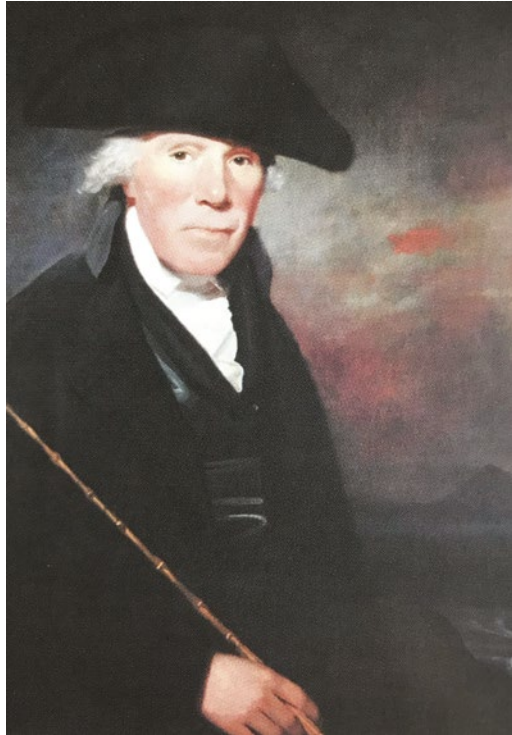


Figure 10. Alexander Wood by George Watson. Source: Royal College of Surgeons of Edinburgh (the photo was taken by the author with permission).

He included Sir Walter Scott among his patients and when Robert Burns first came to Edinburgh in 1787 his leg injury was treated by Wood and the two became friends. Burns described him as “one of the noblest men in God’s world.”

A lover of verse, his bonhomie is appropriately commemorated in this short poem by a contemporary.

“Here lies Sandy Wood, a good honest fellow,  
 Very wise when sober, but wiser when mellow;  
 At sensible nonsense by no man excelled.  
 With wit and good humour dull care he repelled” [4: 40].

## Summary

Kay recorded insights into Edinburgh characters at a time when the city was enjoying a few but memorable decades of glory. He had the caricaturist’s ability to convey the character of his subjects with a few skilful stokes of his pencil and left us with a valuable record of Edinburgh in its Golden Age.

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## **Chirurdzy na portretach Kay'a**

### **Streszczenie**

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Słowa kluczowe: chirurgia szkocka, historia medycyny, John Kay, karykatury, szkockie oświecenie