JOHN ABERNETHY AND OPERATIVE SURGERY

JOHN L. THORNTON, LONDON, ENGLAND

Librarian, St Bartholomew's Hospital Medical College, London

John Abernethy, who died in 1831, is honoured as the founder of St Bartholomew's Hospital Medical College and remembered as an eccentric character around whom numerous stories were woven, but he is not generally upheld as an example of a great surgeon. Indeed, a careful study of his character over a number of years, made while fragments about his life and professional career were being collected, suggests not only that he was physically unfitted for operative surgery but that he was further handicapped by the course of events during his surgical career.

Born in 1764, John Abernethy at the age of fifteen was apprenticed to Sir Charles Blicke (1745–1815), then assistant surgeon—and from 1787 surgeon—to St Bartholomew's Hospital. Young Abernethy attended the anatomy lectures of Sir William Blizard (1743–1835) at the London Hospital and the surgical lectures of the great Percivall Pott (1714–1788) at St Bartholomew's. When Pott resigned as senior surgeon in 1787, to be succeeded by Blicke, John Abernethy was elected to the position of assistant surgeon. But he still attended lectures, going to Dr Andrew Marshall's house in Bartlett's Buildings, Holborn, for further instruction in anatomy, and to the inimitable John Hunter (1728–1793), whose disciple he became after Marshall's death. Abernethy was thus equipped for his profession with a thorough grounding in anatomy, the benefit of teaching by the greatest surgeons of the period, and a keen interest in research engendered by Hunter.

As early as January 1, 1788, John Abernethy was advertising his anatomy lectures to be delivered at Number 17 Bartholomew Close. As assistant surgeon he received no emolument from the Hospital; his income depended upon private cases and the fees of pupils and apprentices. Neither did he have much experience of practical surgery within the Hospital, for this apparently devolved almost entirely upon the full surgeons. He was to hold this appointment for twenty-eight years, not becoming full surgeon until 1815.

It is apparent that Abernethy realised at an early stage the probable turn of events and concentrated upon teaching. He was to weld together the lectures given by individuals within the Hospital into a course, thus laying the foundations of the Medical College. He himself lectured on anatomy, physiology and surgery, and in 1791 the Hospital erected a lecture theatre to accommodate the pupils attracted by him. This theatre had to be enlarged in 1822. Many of his pupils later paid tribute to him as a lecturer, and he obviously excelled as a teacher. He investigated with the students, introducing stories and acting a part to impress the lessons on the memories of his hearers.

ABERNETHY THE OPERATOR

Of John Abernethy as an operator Sir Robert Christison (1885) has written: "He was a good operator when driven to operate; but he disliked it. Cullen, who was his anatomical assistant, told me he had seen him in his retiring room, after a severe operation, with the big tears in his eyes, lamenting the possible failure of what he had just been compelled to do by dire necessity and surgical rule." Abernethy has never been called a brilliant operator, and his dread of operating, in the days before the introduction of anaesthetics, was in direct
contrast to his contemporaries and immediate successors. His sensitive nature which rebelled against the infliction of pain was noticeable during his early days when he was particularly interested in physiological experiments, for he never used live animals.

This reluctance to operate probably influenced Abernethy to attempt conservative treatment wherever possible, and he was most successful in its application. He wrote (Abernethy 1830 a): "If we are of opinion that the first symptoms will not be so severe as to endanger life, we ought to give the patient the chance of saving his limb; for every surgeon
of experience knows that cases of which he entertained scarcely any hope have, nevertheless, done well; and it is certain that amputations performed on a sudden are generally, by the double shock they impart to the system, productive of very formidable constitutional disturbance, and that the wound made in the operation goes on in a very unfavourable manner. Should amputation become necessary at a future period, it may be performed under much more advantageous circumstances than at the outset."

Here is a description of his treatment of a case, written in his own words (Abernethy 1830 b): "A gentleman between forty and fifty years of age, and of a weakly constitution, whilst engaged in superintending some repairs of his house in my neighbourhood, fell from a scaffold and received a very formidable compound dislocation of the foot outwards. The ankle joint was, indeed, torn open throughout two-thirds of its circumference. It was at first thought that amputation was the only resource that afforded the patient a chance of recovery. The patient was lying upon a kind of temporary bed which had been prepared for him in one of the lower rooms of his house, and in a state of great agitation when I first saw him. I begged him not to be alarmed at the frightful appearance of the injured parts, as I saw that I could readily replace them in their natural position, with a prospect of his doing very well. I desired him to turn completely on his left side and place the injured limb so that it might lie in an easy position on its fibular surface, bent at a half right angle to the thigh which was placed in a similar position with relation to the pelvis. I then extended the foot as far as I could move it without using violence, in order to bring the narrow or back part of the astragalus into the intermalleolar space, and to relax the peronei muscles. I drew out the skin which was inverted and stretched tightly over the astragalus, and then, by making gentle extension, and slightly turning the heel and dorsum of the foot inwards, brought the articulating surfaces into their natural apposition. The edges of the lacerated skin came into such exact contact that the wound became scarcely perceptible, and the accident, which had appeared so formidable at first, now seemed of little importance. I was proceeding to give directions to the servants about the arrangement of the bed, when the patient told me he expected some surgeons, who had previously seen him, to return with the amputating instruments. I therefore waited their coming. On their arrival, they seemed struck with the perfectly natural appearance of the limb. They, however, were afraid of the consequences of the injury, and seemed anxious that I should pledge myself that the case would do well. This of course I could not do; but said I was assured no degree of inflammation would immediately come on to endanger the life of the patient, and therefore that it was proper to give him a chance to preserve his limb; adding, that if the powers of the constitution should prove inadequate to the reparation of the injury, amputation might still be resorted to, and with a better chance of success than if the operation were to be undertaken immediately. I then requested permission to do up the limb. The bed being arranged, the patient, in the position already described, was desired to lay himself in a posture which he could preserve for an unlimited length of time, and I placed the leg and foot upon a well padded japanned splint, which is not liable to be acted on by moisture. I then closed the wound accurately and completely with sticking-plaster, which was afterwards varnished, and directed the limb to be kept exposed to the air, and constantly moistened with water, so that there should never be any perceptible increase of temperature, either to the patient or others. A considerable portion of either end of the wound united by adhesion, but the middle remained open, and discharged for a great length of time. The foot and leg were much swollen, and abscesses formed beneath the fascia in four different places. These were opened successively as soon as a fluctuation was distinctly felt; for if this be not done, the fascia will be extensively detached, and the matter will make its way out by the original wound. The formation of these abscesses in compound dislocations of the ankle joint is a very constant occurrence, nor can we be surprised that it should be so, when we consider how much the muscles must have been sprained and drawn from their natural situations, to the injury of their cellular
connections with the fascia. After the interval of a month, the swelling of the leg and foot gradually subsided, and the limb assumed its natural appearance. The wound was not completely closed till three months had elapsed; and it was only after an interval of half a year that the patient was able to bear his weight on the injured foot. The limb, however, at length became a very useful limb, and continued so for many years afterwards, as long, indeed, as I can remember the patient."

A GRATEFUL PATIENT

A Mr Wood of Rochdale, a pupil of John Abernethy, has told the following story of his teacher: "It was on his first going through the wards after a visit to Bath, that, passing up between the rows of beds, with an immense crowd of pupils after him—myself among the rest—that the apparition of a poor Irishman, with the scantiest shirt I ever saw, jumping out of bed, and literally throwing himself on his knees at Abernethy's feet, presented itself. For some moments, every-body was bewildered; but the poor fellow, with all his country's eloquence, poured out such a torrent of thanks, prayers and blessings, and made such pantomimic displays of his leg, that we were not long left in doubt. 'That's the leg, yer honner! Glory be to God! Yer honner's the boy to do it! May the heavens be your bed! Long life to your honner! To the divole with the spalpeens that said your honner would cut it off!' etc. The man had come into the hospital about three months before, with a diseased ankle, and it had been at once condemned to amputation. Something however induced Abernethy to try what rest and constitutional treatment would do for it, and with the happiest result.

"With some difficulty the patient was got into bed, and Abernethy took the opportunity of giving us a clinical lecture about diseases and their constitutional treatment. And now commenced the fun. Every sentence Abernethy uttered, Pat confirmed. 'Thre', yer honner, divole a lie in it. His honner's the grate dochter entirely!' While, at the slightest allusion to his case, off went the bed clothes, and up went his leg, as if he were taking aim at the ceiling with it. 'That's it, by gorra! and a bitther leg than the villins that wanted to cut it off!' This was soon after I went to London, and I was much struck with Abernethy's manner; in the midst of the laughter, stooping down to the patient, he said with much earnestness: 'I am glad your leg is doing well; but never kneel, except to your Maker.'" (Macilwain 1856).

LIGATION OF THE EXTERNAL ILIAC ARTERY

It was probably about 1797 that Abernethy performed the first successful ligation of the external iliac artery for aneurysm (Abernethy 1807). Samuel Cooper (1832) mentions this operation in his Hunterian Oration, when discussing Abernethy's skill as an operator: "As a zealous cultivator of surgery John Abernethy could not have been passed over in silence on an occasion like the present; for not only did he strenuously exert himself for forty years in inculcating, in the most pleasing style, some of the most valuable doctrines of John Hunter but he was himself the source of various improvements, which reflect credit upon his own genius. It was some time before the commencement of the present century that I saw him tie the carotid artery, and it may be doubted whether the operation had ever been fairly done, at an earlier period.* Very soon afterwards, I was present at two cases, in which he took up the external iliac artery for the cure of femoral aneurysm; an operation, first planned by his mind, and first performed by his hand; an operation too that now justly ranks

* "Here, the common carotid was cut down to, and tied, on account of haemorrhage from an extensive lacerated wound of the throat. It was Sir Astley Cooper who first took up the carotid artery for the cure of aneurysm; a proceeding that has already been a means of saving many lives."
as one of the boldest and greatest achievements in modern surgery. If further proof be required of his merits as a surgeon, it may be found in his classification of tumours, in his views of the injuries of the brain, and lumbar abscesses; and in his precepts relative to the frequent and close connection of apparently local disease, with derangement of digestive functions."

David Tait (1826), a surgeon at Paisley, also paid tribute to Abernethy: "It will be seen, on reviewing the case, that the only material points in which I have deviated from the method recommended by Mr Abernethy, are, first, that in both operations I disturbed and separated the artery less from its connections, and employed but one ligature; and, secondly, that in the last operation, in going down to the peritoneum, I divided the muscles fibre by fibre."

The article continues: "The complete success which has attended these operations, while certainly it affords me one of the highest gratifications the practice of my profession can procure me—chiefly affects Mr Abernethy.

"Though the claims of a successful operator on the gratitude of his individual patient be paramount to every thing else, yet on his profession his claim is but secondary. Accident has placed under my treatment, a case, as far as I know, unparalleled in the history of surgery, and it has been cured; but I have only put in practice what every surgeon of these days ought to have done. When, thirty years ago, Mr Abernethy formed the firm resolve of cutting open the walls of the belly and seizing the external iliac—he made a mighty step in advance—he formed an epoch in the history of his profession. John Hunter, from reflecting on the haemorrhage proceeding from the vessel below the sac, after an operation in 1779, where Mr Broomfield* had, 'for security,' tied the crural artery three or four inches above the aneurismal sac, had probably the first glimpse at the great improvement of tying, in cases of aneurysm, the artery nearer the heart, and at a distant part from the disease.

"His eminent successor has extended the principles of the illustrious Hunter. So firmly impressed was Mr Abernethy with the certainty of ultimate success, that, nothing daunted by the unfortunate issue of his two first cases, he persevered, and at length successfully secured the external iliac artery. His steps have been followed by a host, till at length it needed but a case such as mine to add the finishing touch to his well-earned fame.

"In doing justice to the merits of such men, we act but the part of prudence—since, if we do not, indignant posterity will."

A further contribution to the debate on priority in ligating the carotid artery has been made by J. J. Keevil (1949) in an interesting paper on David Fleming.

ONE KIND OF PATHOLOGY

Abernethy stressed the part played by diet in disease, and was unwilling to divorce medicine from surgery. As William Lawrence (1834 a) put it: "He saw clearly that there is only one kind of pathology; that there is no distinction in source, nature, and treatment, between medical and surgical diseases; and consequently that surgeons ought to study general pathology and therapeutics. On this account he has been regarded as an intruder on the territory of physic; and has been accused of wishing to make surgeons physicians. If it is meant to charge him with wishing that we should add to our surgical knowledge that of medicine, the accusation is well founded, and does him great honour. By thus exciting surgeons to cultivate medical science generally, he has at the same time benefited the public, and increased the respectability of his own profession."

The writings of John Abernethy are still of interest to readers. He presents many case histories and quotes his predecessors, for he had an extensive knowledge of the history of medicine. There is much sound advice to be gained from his observations, and he presents a vivid picture of the medical science of the period.

* William Bromfield (1712-1792).
John Abernethy could be rude when he thought it necessary and made enemies, who perpetuated stories of his eccentric behaviour. Yet even those with whom he had had disputes, upon reflection thought kindly of him. Edward Stanley (1793–1862) in his Hunterian Oration (1839) stated: "Gratitude, and respect to his memory are justly due for the excellence of his instructions, enlivening as he did, the driest details of his subject, communicating to others the enthusiasm for surgery which he so strongly felt." Sir William Lawrence, a former pupil of Abernethy, who had publicly attacked his teacher in lectures delivered at the Royal College of Surgeons, later wrote (1834 b): "Under some roughness of exterior, as regards manner, Mr Abernethy possessed warm feelings, benevolent disposition, and a generous spirit. He freely bestowed professional and pecuniary assistance on the needy and deserving." And a pupil once remarked upon his treatment of a patient in the wards: "How kind he was to that woman; upon my soul, I could hardly help crying."

As a teacher John Abernethy excelled, and his popularity with the pupils was enormous. His students and patients in St Bartholomew’s Hospital were his first consideration, and he would never permit attendance on private patients to interfere with his duties at the Hospital. His lectures and writings profoundly influenced his successors in the practice of surgery; if Abernethy was not himself a great operator, he at least made several worthy contributions to the history of surgery.

REFERENCES