

Master John of Arderne – surgeon of Newark

J Beynon FRCS *Department of Surgery, Bristol Royal Infirmary, Bristol*
N Carr FRCS *Department of Surgery, Barnet General Hospital, Hertfordshire*

Keywords: history of medicine, 14th century; John of Arderne; fistula in ano; surgery

Introduction

In 1983, the Section of Colo-Proctology of the Royal Society of Medicine introduced the John of Arderne medal (Figure 1) to be awarded to the author of the best scientific paper presented to the Section. As two former winners of this award, it behoves us to outline the life of this 14th century surgeon and his contribution to the surgery of fistula in ano.

Biographical details

Little is known of this 14th century surgeon who was the founder of modern fistula in ano surgery¹⁻⁴. He was probably descended from the family of Arderne or Arden who were the Lords of Watford in Northamptonshire at the beginning of the 12th century. From there the family spread to Cheshire and Staffordshire, John being the hereditary name in the Cheshire branch, and it was possibly one of these Johns who received a grant of land from Edward the Black Prince and was mentioned in John of Gaunt's register as being appointed Seneschal (Superintendent) of the Manor of Passenham in Northamptonshire in October 1374. Thus the name was well known in London, Midlands, Cheshire and Lancaster in the 14th century, though currently there is little evidence to indicate from which branch of the family the surgeon came.

The date of his birth (1307) is fixed by his own statement that he was 70 in the first year of the reign of Richard II. It is possible that Arderne was educated at Montpellier and practised in France as an English

military surgeon during the earlier and more successful years of the One Hundred Years War. There is some evidence to suggest that he later practised in Antwerp. When he returned to England he treated patients in Wiltshire and from 1349 to 1370 lived at Newark in Nottinghamshire.

In 1370 he moved to London and assumed the title of Magister Johannes de Arderne after being admitted to the small guild of master surgeons soon after his arrival. This hierarchical system distinguished him on the one hand from the Doctor of Physic, his superior, and on the other from the barber surgeons and apothecaries who ranked below him. In 1376 he issued his treatise on the cure of fistula in ano. In this he says that it was written 'with my own hand in the year when the strong and warlike Lord [Edward the Black Prince] was taken to God'. There is no evidence to show that John of Arderne was living in the reign of Henry IV, who came to the throne in 1399.

This master surgeon was well educated and had wide experience which was gained by personal observation rather than the teaching of schools. He frankly reported his failures as well as his successes and revealed that he nearly killed two patients with arsenic in his early days of practice. He wrote on fistulas, diseases of the eye, on clysters, on bleeding and on plants and their uses. The number of manuscripts which still remain in various libraries show that his works were read and valued by his contemporaries and immediate successors.

His works were originally written in Latin, though English translations were soon produced. Arderne's treatise on the treatment of fistula in ano was certainly the most interesting of his works. An abstract of this was first published by John Read in the reign of Queen Elizabeth I but was not printed in full until 1910 by D'Arcy Power¹, a surgeon at St Bartholomew's Hospital, who chose to produce an early 15th century translation.

John of Arderne's treatment of fistula in ano
 D'Arcy Power reflected in his book in 1910 that the hardships of the One Hundred Years War must have produced many cases of ischiorectal abscess which led to fistula. Long, cold, wet hours in the saddle led to the condition in the knightly classes, whilst the sedentary habits and gross feeding causing chronic constipation accounted for the condition in the religious and civic population.

Arderne, in his treatise, wrote that the treatment of fistula in ano had fallen into disrepute because it was a troublesome condition which brought very little credit to surgeons and required long and patient treatment for which the majority of sufferers were not prepared to pay. Certainly the first two of these



Figure 1. The John of Arderne medal presented by the Section of Colo-Proctology of the Royal Society of Medicine

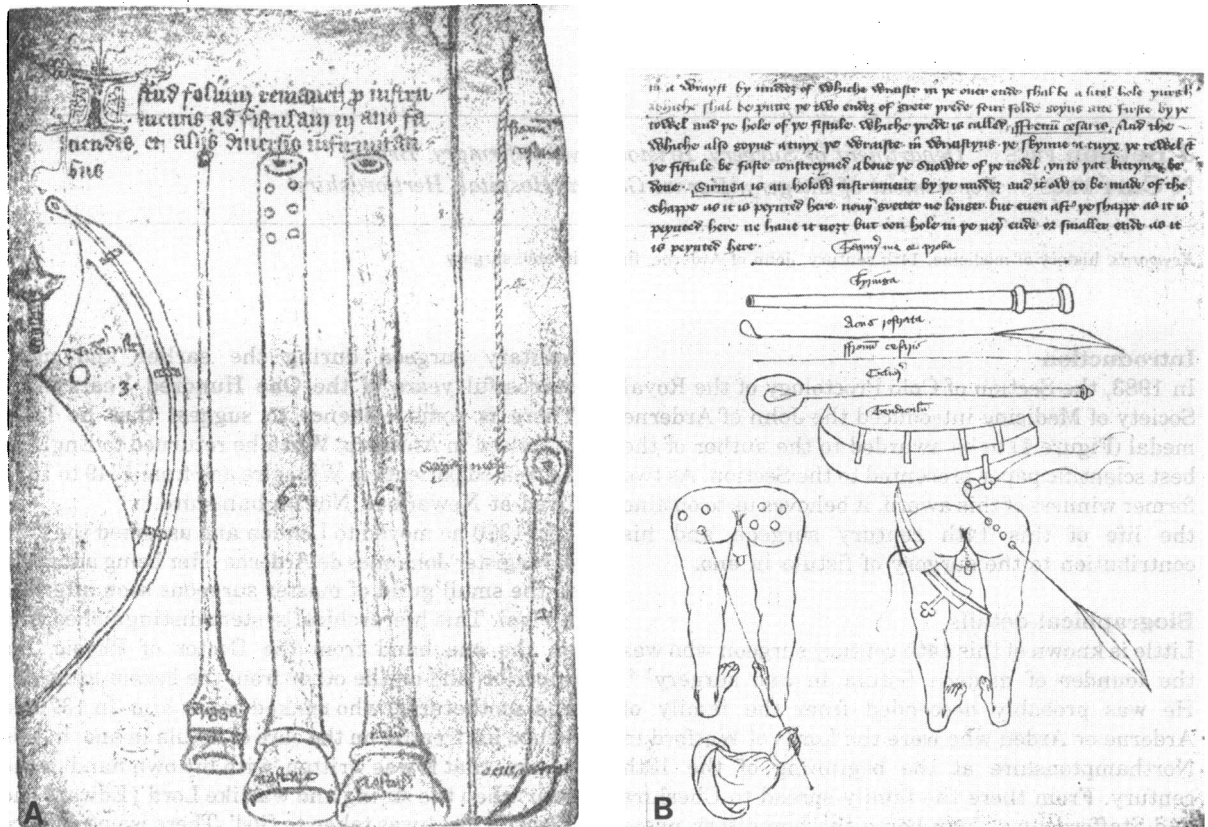


Figure 2. Arderne's instruments for the treatment of fistula in ano. (Reproduced from (A) Sloane MS. 6, leaf 144, back; (B) Sloane MS. 2002, leaf 24. Courtesy British Museum)

observations hold a lot of truth today. (William de Salicet (fl 1245), practising in Bologna and considered to be one of the most skilful surgeons of his time, had such a dread of fistulae that he wrote, 'when the fistula is complete it is assuredly so difficult to cure that it is better and more honourable for the surgeon to give up the case at once'.)

The operation which Arderne advocated was a modification of the operation used by Albucasis (mort 1013) who laid open the fistula tract and used setons. Arderne positioned his patients in lithotomy and passed a probe (called a *sequere me*) (Figure 2) through the fistulous tract into the rectum. The eye of the probe was threaded with a ligature of four strands (the *fraenum caesaris*). This was drawn through the tract knotted and tightened by means of a peg (the *wrayste*) - fixed to the widest part of a gorget (the *tendiculum*). The ligature was used to control bleeding and partly to maintain a correct line when the fistula was being divided. The gorget or *tendiculum* was pushed well up into the tract and a grooved director with a curved end (the *acus rostrata* or snowted needle) was passed along it until it was projecting into the rectum where the probe had previously been inserted. A shield (the *cochlearia* or spoon), with a depression in the centre, was then passed through the anus until the grooved director engaged the depressed notch. The purpose of the shield was to protect the opposite wall of the rectum. A scalpel (the razor lance) was passed along the groove in the *acus rostrata* and the fistula cleanly divided along its whole length by drawing the knife, the *acus rostrata* and the spoon out of the rectum with a single

movement. The ligature was removed at the same time. Each branch of the fistula could be laid open in turn or postponed. Arderne had found by observation that once the main tract was laid open the other channels often healed themselves. He applied only a little oil of roses to the wound with the white or yolk of an egg and washed the wound with tepid water and a sponge.

Magister Johannes de Arderne's fame as a pharmacist outlasted his reputation as a surgeon. Yet he was a practical surgeon who carried out his work using a method not very different from that of the modern aseptic surgeon. He had sufficient innovation to design an operation for the cure of fistula in ano which, after falling into disuse for nearly five hundred years, is now almost universally employed.

References

- 1 Power D, ed. Arderne J. *Treatise of fistula in ano, haemorrhoid and clysters from an early fifteenth century manuscript translation*. London: Kegan Paul, Trench, Trubner and Co, 1910
- 2 Power D, ed. Arderne J. *De Arte Phisicali et de Chirurgia* (Vol 1 translated from the replica of the Stockholm manuscript in the Wellcome Historical Medical Museum, London). John Bale, Sons & Danielsson, 1922
- 3 Billings JS. Arderne J and early English Medical writers. *Johns Hopkins Hosp Bull* 1894;5:21-2,67
- 4 Swain P, ed. Arderne J. *De fistula in Ano* (1370). *St Bartholomew's Hospital Journal* 1966;70:312-7

(Accepted 10 February 1987)