

## George Armstrong: pioneer paediatrician

George Armstrong was probably the first physician to practice exclusively as a paediatrician in this country. He published the first account of the postmortem appearance of congenital pyloric stenosis. This year marks the 300th anniversary of his birth.

George Armstrong was born in Castleton, a small town in Roxburghshire, Scotland, in 1720. He was the third son and youngest of the six children of the Presbyterian minister of that town. In 1735, George followed his elder brothers John and William to become a medical student in Edinburgh, attending the anatomy classes of Alexander Munro. Two years later, George became the first recorded member of the newly formed Edinburgh Medical Society.

Although he completed the full medical course, George did not obtain his MD degree, probably because his elder brother John, now working in London, either refused to pay the cost of the diploma, or dissuaded him from taking the examination.

George apparently practised in Edinburgh for a time before fleeing to London to join his brother John and to escape from the Jacobite rising of 1745. In London, George lodged with John and assisted in his medical practice. In 1755, George Armstrong married Anne, the daughter of a prosperous candle maker, who was his patient. They had three daughters. A few weeks after the birth of the first daughter, Anne found that her milk was insufficient to nourish the child. Avoiding the usual custom of employing wet-nurses, George succeeded in rearing the baby on cow's milk, an unusual feat in those days. This seems to have triggered Armstrong's interest in diseases of childhood – in 1757, he published his textbook *A treatise on diseases most fatal to infants, to which is added rules to be observed in the nursing of children, with a particular view to those who are brought up by hand* (ie without breastfeeding by the mother).

Armstrong kept careful records of his young patients, together with autopsy findings in fatal cases, which enabled him to compile statistical evidence of the effectiveness of different treatments and medications in various illnesses and to correlate the clinical features with the postmortem findings. He updated his work in successive editions, which appeared in 1771, 1777 and 1783. A posthumous edition appeared in 1808.

The second edition gave the first description of the postmortem appearance of infantile pyloric stenosis. This was long before its detailed account by Harald Hirschsprung (of congenital aganglionic megacolon fame), in 1888. Armstrong also studied the then widespread manifestations of tuberculosis in children and questioned the tradition that attributed many deaths in infancy to teething (as can be seen given as one of the causes of death in the 'Lists of mortality' published in those times).

George Armstrong's work undoubtedly initiated the scientific study of diseases of childhood. That great paediatrician, Sir George Henry Still, in his *History of Paediatrics* (1931), described Armstrong's textbook as 'the beginning of a great movement, which was to lift the study of diseases of children onto a different plane by the accumulation of special experience'.

In 1769, Armstrong opened a dispensary for the infant poor in a house in Red Lion Square, in Holborn. This was not the first such institution, but was the first to specialise exclusively in the medical care of infants and children.

In the same year, Armstrong obtained the degree of Doctor of Medicine from the University of Aberdeen, presumably by purchase – his only medical qualification.

In 1772, Armstrong moved both the dispensary and his home to Soho Square. Here he saw and treated many thousands of infants and children, many without charge. He contributed to the costs of the dispensary from his own purse when donations fell short. He was barely able to provide for his own family from the fees obtained from his private practice.

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By 1780, the dispensary had treated some 35 000 children, some being brought from villages outside of London. The dispensary also served as a centre for Armstrong to provide clinical instruction in diseases of children.

George Armstrong's brother John died in 1779, leaving nearly all his comfortable estate to George's surviving two daughters, with a life interest to George. This well-intentioned bequest proved to be a disaster. George borrowed money secured on John's estate. When he was unable to repay the loan, George and his wife were arrested for fraud, but the charge was dismissed.

In December 1781, George Armstrong suffered a stroke, which paralysed the left side of his body. He gradually recovered and set to work on the fourth edition of his treatise.

Three years later, in 1784, a surgeon named Michael Underwood published a book entitled *A Treatise on Diseases of Children* which, in fact, borrowed many of Armstrong's ideas. The book supplanted Armstrong's treatise and damaged his reputation.

George Armstrong died in January 1789. His wife received a Royal pension. She wrote that George 'had been ruined by the dispensary'.

During the 19th century, there was a complete eclipse of the recognition of Armstrong's contribution to paediatrics. The historian William Maloney devoted the last years of his life to searching for information about the brothers. His biography, entitled *George and John Armstrong of Castleton*, published in 1954, after his death, proclaimed George Armstrong to be the father of modern paediatrics.

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