ORIGINAL ARTICLE

Interesting Life Stories of Some Great Eponymous Anatomists

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ABSTRACT

The word 'eponym' is derived from the Greek 'epi' which roughly means 'upon' and 'onyma' which means 'name'. Strictly speaking, an eponym is a word derived from the name of an actual person or a fictional or mythical character[1]. Eponyms have been officially excluded from anatomical nomenclature. Yet whether we like them or not, criticize them as archaic and unscientific, anatomical eponyms are still in current use, especially amongst clinicians[2]. The following paragraphs will cover the life events few famous eponymous anatomists who are renowned for their contribution to the field of anatomy.

Introduction

Gabriele Falloppio (1523-1562), often known by his Latin name Fallopius, was one of the most important anatomists and physicians of the sixteenth century. This was the golden age of anatomy and Falloppio's contemporaries included such great anatomists as Vesalius, Eustachius, and Colombo (whom he succeeded at Padua)[3]. After the death of his father and ensuing financial difficulties, he was directed toward a career in the church, becoming a priest in 1542. Fallopius lived in extreme misery, which is probably the reason why he tried to earn some money practicing surgery. However, he displayed so little aptitude for that subject - as demonstrated by the fatal outcome of a number of his cases - that he soon thereafter abandoned it and returned wholly to the study of medicine[4].

Falloppio was appointed to chair of anatomy at the University of Pisa. He was a painstaking dissector and is remembered for the precision of his descriptions, which he published in the only book of his that appeared in his lifetime - Observationes anatomicae from 1561. Falloppio's description of the auditory apparatus was superior to that of Vesalius and includes the first clear account of the round and oval windows, the cochlea, the semicircular canals, and the scala vestibuli and tympani. He described the Fallopian tube, which now bears his name. He also coined the word "vagina" for what had previously been called the cervix or neck of the uterus[5].

Fige. 1: Gabriele Falloppio

Fallopio's treatise on syphilis advocated the use of condoms, and he intiated what may have been the first clinical trial of the device. In reporting the results of perhaps the first clinical trial of condom efficacy Falloppio proclaimed: "I tried the experiment [the use of condoms] on 1,100 men, and I call immortal God to witness that not one of them was infected"[4]. Though he died when less than forty, he had made his mark on anatomy for all time.

Johann Georg Wirsung (1589-1643) was a prosector at Padua (Italy) for many years. He discovered the main pancreatic duct on March 1642 during the dissection of a man who was found guilty of murder and executed by hanging. Wirsung's discovery is recorded on a single rare copper plate, as follows: "Next came the finding of the pancreatic duct in Vesling's dissecting room at Padua by his prosector, Georg Wirsung (1642)"[6]. Wirsüng never knew the function of the duct which he had discovered. "Is it an artery or a vein", he asked; "I have never seen blood in it". A colleague named it "The Duct of Wirsüng"[7].

Fig.2: Drawing of pancreatic duct by Wirsung, 1642.

Wirsung was murdered while entering his house at night in 1643 by a Belgian student, probably as a result of a quarrel over who was the first to discover the duct.

Thomas Willis (1621-1675) was one of the greatest men in 17th century medicine. Willis' name has survived largely because of his description of the circle of Willis - the arteriosus circle at the base of the brain[8].

He coined the terms thalamus opticus, nucleus lentiformis, and corpus striatum. Willis described epidemic typhus and typhoid in 1659, and also described whooping cough, meningitis, narcolepsy and general paralysis of the insane. He recognised that hysteria was not a disease of the uterus but was cerebral in origin. He first described and named puerperal fever[5].

Willis' fortunes as a clinician changed when, on 14 December 1650, along with Petty, he revived a prisoner named Anne Green. Anne Green was a 22 year old woman who had been employed as a housemaid by Sir

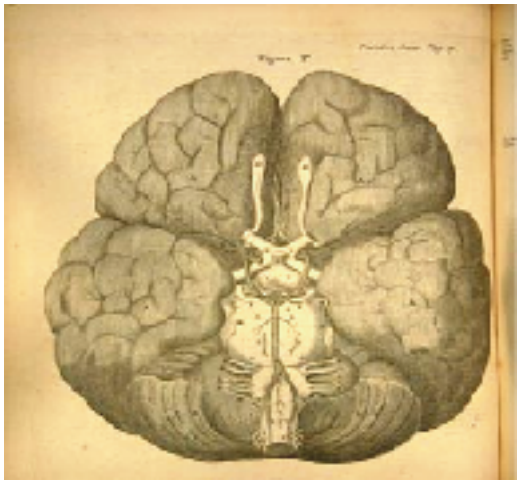

Fig. 3: Thomas Willis, Cerebri anatomie (1664). Showing circle of Willis.

Thomas Read in Oxfordshire. She was probably seduced by his grandson who turned her down when she became pregnant. The unlucky girl tried to hide her pregnancy, and, when giving birth to a premature child, she hid the body. The dead body was found, and Anne Green was accused of the murder of her own child. She was sentenced to die by the usual method: hanging. She was hanged in Oxford. Descriptions note that she hung for half an hour, was then pronounced dead and placed into a coffin[9].

By the time that Willis and Petty opened the coffin to start her dissection at Petty's residence, a strange noise was emitted from her throat and she started to breathe. They rubbed her arms and legs until she opened her eyes, then bled her of five ounces of blood. She could speak in twelve hours, answer questions in a day, and eat solid food in four days. Within a month she had recovered completely[9].

After Anne Green's unique rescue the court usher attending the execution turned to the prison director of Oxford, asking that Anne Green be reprieved. This was done. After being set free, Anne Green moved to friends in the countryside - bringing along with her the coffin in which she had been laid a "corpse". She later married, had three children and lived for fifteen years after her famous execution. Willis' personal life was

touched with tragedy; six of his eight children died before adolescence; his first wife, died in 1670; and both of his brothers' predeceased[5].

Regnier de Graaf (1641-1673) was a Dutch physician and anatomist. De Graaf's position in the history of reproduction is unique. His personal contributions include the description of testicular tubules, the efferent ducts, corpora lutea and to describe the function of the Fallopian tubes and hydrosalpinx[5].

His eponymous legacy are the Graafian (or ovarian) follicles. He himself pointed out that he was not the first to describe them, but described their development. The mature stage of the ovarian follicle is called the Graafian follicle in his honour, although others including Fallopius, had noticed the follicles previously (but failed to recognize its reproductive significance). Despite his contributions, De Graaf made a number of errors in addition to believing that the ovum was the the follicle. Because he observed rabbits rather than humans, he assumed fertilization took place in the ovary. He believed that the seminal vesicles stored spermatozoa[10].

After the early death of a son, De Graaf died in 1673 at age only 32 years. The reason for his death is unknown. He was, however, affected by the death of his sons. Recent speculation that he may have committed suicide is entirely unfounded[10].

Fig. 4: The Ovary by Reinier de Graaf, 1668.

James Douglas (1675-1742) was one of the most respected Scottish physician and anatomist. He was a member of the Royal Society, and physician to the Queen. His major publication in this field was that on the peritoneum (1730), an excellent monograph that drew attention to the duplicature of the peritoneal membrane, at that time a controversial subject. In this book there is a short description of the structure later known as the pouch of Douglas and still recognised by that name[5].

Douglas was also a well-known man-midwife. Mary Toft, an English woman who in 1726 became the subject of considerable controversy when she tricked doctors into believing that she had given birth to rabbits. The matter came to the attention of St. André, surgeon to the Royal Household of King George I of Great Britain. St. André investigated and concluded that Toft was telling the truth. The story came to the attention of the press and caused a national sensation. Douglas was asked to investigate the case. Douglas went to see Toft, and subsequently exposed her as a fraud. The resultant public mockery created panic within the medical profession. Several prominent surgeons' careers were ruined, and many satirical works were produced[11].

Fig. 5: Mary Toft, Hunterian collection, 1727.

Antoine Louis (1723-1792) was a French surgeon and physiologist. In 1750 he was appointed professor of physiology, holding that tenure for 40 years. Louis was also a pioneer of French medical jurisprudence and in 1749 presented a classic discussion of the differential signs of murder and suicide in case of hanging. Another name for the sternal angle is the "Angle of Louis", which bears his name[12].

Louis is credited with designing a prototype of the guillotine[12]. On the advice of Antoine Louis, the German engineer Schmidt built the first official beheading machine in Paris. Joseph Guillotin, a professor of anatomy was also on the committee. The machine was originally called the Louisette or Louison after Antoine Louis. But the press preferred guillotine as it had a nicer ring to

it. The guillotine evokes images of horrifying and bloody public executions during the French Revolution in the eighteenth century.13 When Guillotin himself died, his descendants have since changed their surname because of the association with a method of execution[14].

Fig. 6: Antoine Louis

Monro, a family of three Scottish doctors-father, son, and grandson, who lifted Edinburgh University to a centre of medical teaching in the 18th and 19th centuries. The Monros, all named Alexander and differentiated as primus, secundus, and tertius, held the chair of anatomy at Edinburgh for 126 years (1720-1846) without interruption! All of them taught for long periods: thirty-eight, fifty-four, and forty-eight years respectively[15]!

Monro secundus (1733-1817) is considered the finest teacher and anatomist of the three. He was first to describe definitively (1783) the interventricular foramen between the lateral ventricles of the brain (known as foramen of Monro)[16].

Fig.7: Observations on the Structure and Functions of the Nervous System. Alexander Monro, Secundus (1783). This work described and illustrated the interventricular foramen, named the Foramen of Monro.

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