

By Dr Cuthbert Teo Eng Swee, Editorial Board Member

## Eponyms in Medicine

The word 'eponym' is derived from the Greek 'epi' which roughly means 'upon' or 'in addition', and 'onyma' which means 'name'.

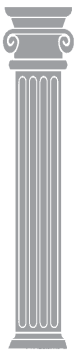
Strictly speaking, an eponym is the name of the person who can be real or imaginary, from which the name of something else is derived. Thus, Romulus is the eponym for Rome; the Emperor Constantine I or Constantine the Great is the eponym of Constantinople; and Queen Victoria is the eponym for Victorian architecture.

Some of the earliest uses of eponyms were by the ancient Greeks and ancient Romans, who named their years after their magistrates and consuls, respectively. Thus, the year 59 BC would have been known to the Greeks as Leucius, and to the Romans as Marcus Bibulus and Julius Caesar (two consuls were elected each year).

In contemporary English, the term eponym has also been used to refer to something which is self-titled, for example, the book *My Life: Bill Clinton* could be described as Bill Clinton's eponymous book; and *Gray's Anatomy* could be described as Henry Gray's eponymous book.

Peculiarly, in the Sciences, and particularly in Medicine, the term eponym is generally understood to mean something (like a disease or device in medicine) which has been named after a person. These eponyms are generally understood to honour the discoverer. Thus the diesel engine is named after a German engineer Rudolf Diesel who invented a type of internal combustion engine that used compression ignition, and who patented it in 1893. Or Asimov's three laws of

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robotics, who first introduced them in his 1942 short story *Runaround*. Sometimes, eponyms are used to honour not the discoverer, but to honour someone who is prominent in a particular field. For instance, the Hale telescope at the Palomar Observatory in California was not built by the astronomer Gregory Hale in the 1940s, but he was instrumental in securing a grant to build it.

In the case of the diesel engine, it is possible that the engine was wrongly attributed to Diesel, as the English inventor Herbert Akroyd Stuart had built a compression ignition engine in 1891. Sometimes, perhaps often, things are named falsely or wrongly after persons because of their high social status and high visibility in the field, long after a particular discovery had been made. (Professor of Statistics, Stephen Stigler of the University of Chicago, wrote about this phenomenon in his eponymous book *Stigler's*



Dr Teo is a forensic pathologist by training. He dreams of having a condition named after him, preferably not in the field of sexually transmitted infections. However, Dr Teo is realistic enough to realise that his name will never grace an eponym, as he is not likely to self-experiment by doing an autopsy on himself to try to discover a new disease.

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*Law of Eponymy.*) Halley's comet, for example, named after the 17<sup>th</sup> century English astronomer Edmond Halley, had been observed by Chinese astronomers since 240 BC, although Halley did correctly calculate that the comet would appear every 75 to 76 years.

In English, there are a number of ways of forming eponyms.

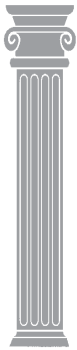
The most common way is to add an apostrophe 's' to the name of a person. In grammar, this is called a synthetic genitive, possessive type. An example of this is 'Hodgkin's disease', a form of lymphoma characterised by the Reed-Sternberg cell (another eponym). Thomas Hodgkin was an English pathologist who was born in 1798, and who died in Jaffa (now of Israel) in 1866. At Guy's Hospital (where I did post-graduate studies and also worked), his colleagues included Richard Bright (of Bright's disease, a now obsolete term for a type of kidney disease) and Thomas Addison (of Addison's disease, or primary chronic adreno-cortical insufficiency). Hodgkin first demonstrated the use of the stethoscope in England at Guy's Hospital, although Hodgkin was severely disappointed that the instrument was initially treated with great scepticism. Some at Guy's Hospital used the bell of the stethoscope as a flower vase instead. Hodgkin was said to have been a very poor businessman. After successfully treating a very wealthy patient and then being given a blank cheque, he filled it in with a sum of 10 pounds, and told the patient that he did so because he did not think the patient could afford more. The wealthy patient took offence and never consulted Hodgkin again. Hodgkin was the first ever appointed reader in pathological anatomy in England. In 1832, he published a paper titled "On some morbid appearances in the absorbent glands and spleen", which described the disease which now bears his name. In 1865, an English physician Samuel Wilks described the disease independently and more accurately. Later realising that Hodgkin was first to describe it, Wilks wrote an article titled "Cases of the enlargement of the lymphatic glands and spleen, or Hodgkin's disease". In 1837, Hodgkin applied for the position of assistant physician (Addison had just been appointed as physician). However,

the position went to his friend and rival, Benjamin Babbington, son of a famous Guy's physician William Babbington. Benjamin's sister was the wife of Bright. Hodgkin then quit Guy's, and began to devote his professional life to social and preventive medicine. He travelled widely, but while in Jaffa, on a trip to Jerusalem, his health declined and he died in Jaffa. An obelisk next to his gravestone there reads: "Here rests the body of Thomas Hodgkin MD of Bedford Square, London. A man distinguished alike for scientific attainments, medical skills and self-sacrificing philanthropy".

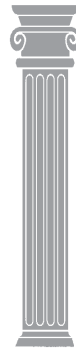
Some of you must have heard of Tay's syndrome, named after Singaporean rheumatologist Dr Tay Chong Hai. It is also known as IBIDS syndrome (ichthyosis, brittle hair, intellectual impairment, decreased fertility, short stature), or PIBIDS if there is photosensitivity. This is a very rare recessive syndrome consisting mainly of trichothiodystrophy (sulphur-deficient brittle hair), growth and mental retardation, and progeria-like facies. Dr Tay described this syndrome in 1971 in the *Archives of Dermatology*.

Another way of forming eponyms is to use a proper noun without the apostrophe 's', that is, the use of the proper noun as an adjective. In grammar, this is called a substantival adjunct, uninflective type. An example of this is Bell palsy (idiopathic facial paralysis), named after the Scottish surgeon Sir Charles Bell (1774–1842). Bell was an anatomist of sort. He and his younger brother, John Bell, both surgeons, wrote a book on anatomy. Charles' special interest was in the anatomy of nerves and sensory organs. Because of the success of his book, he found that jealous colleagues at the University of Edinburgh had blocked him from positions in the University. Bell left for London, where later he took over the Great Windmill Street School of Anatomy. This school had been founded by the brothers John Hunter (of Hunter's chancre of primary syphilis) and William Hunter. (John Hunter performed one of the most infamous self-experiments when he punctured his own penis with a lancet dipped in a lesion from a prostitute, infecting himself with gonorrhoea and syphilis, leading him to believe that the two diseases were the same disease.) Bell became very famous in London,

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and was knighted in 1831 for his contributions to surgery. However, in 1836, at the age of 62, he returned to Edinburgh because he said: "London was a good place to live in but not to die in", although the real reason was because he was by now so famous that he was offered the post of Professor of Surgery at Edinburgh. Despite the eponym, there seems to be an even earlier account of idiopathic facial paralysis by the Dutch physician Cornelis Stalpart van der Wiel in 1683.

A third way to form a medical eponym is to use the analytic genitive with the word 'of', as in 'the Circle of Willis'. This is named after Thomas Willis (1621–1675), an English physician who was considered during his time to be one of the world's, if not the world's, greatest anatomist. Willis practised in London and his work on the brain (*Pathologicae cerebri, et nervosi generis specimen*) was, at the time, one of the most important contributions to understanding brain pathology, particularly in convulsive disorders. Willis was even attributed to 'resurrecting' a 22-year-old dead woman, Anne Green. She was a housemaid who became pregnant by the grandson of her employer. After giving birth prematurely, she hid the body of the infant. After the body was found, she was accused of the boy's murder and sentenced to death by hanging. The execution took place on 14 December 1650. After her body had dropped from the gallows,

people gathered round to pinch her breasts and pull her down by the legs. This pulling of the legs was supposed to help the person die more quickly and shorten the agony of asphyxiation. However, so many pulled on her legs that the court official told the people to leave the body alone for fear that the rope would break. Later, the body was given to a Dr William Petty for anatomy lectures at Oxford University. When Petty and other doctors (including Willis) opened the coffin, the corpse was said to have taken a breath. Willis raised the body to a sitting position, and the doctors opened the mouth and poured hot drinks down. This caused a cough and the doctors began resuscitation by rubbing her hands and feet (BCLS and ACLS had not yet been invented). About 15 minutes later, the eyes fluttered. The doctors began bloodletting and applied compression bandages to the arms and legs to increase circulation (these would seem to have opposing effects on blood pressure to us now). They put her body on a bed, beside that of a woman whose unfortunate job was to keep Anne's body warm. 12 hours after the execution, Anne spoke a few words. After four days, she began to eat solid food, and after a month, she was said to have fully recovered. Later, because of Anne's unique resuscitation, she was reprieved of her crime. Anne moved to the countryside, taking her coffin along as a souvenir, married, had three children and lived for another 15 years. As for Willis, his successes brought him great jealousy from his colleagues, and he was said to have died (at age 54) because of great harassment. He was buried in Westminster Abbey.

A fourth way to form an eponym is to use a truncated form of the proper noun, for example as in 'a positive Babinski', an abnormal reflex elicited when the sole of the foot is firmly stroked causing the big toe to extend and the other toes to fan out. Edme Vulpian, a French neuro-pathologist described the reflex about 50 years before Babinski, but Babinski was the first to realise and describe the diagnostic significance in relation to pyramidal tract lesions, in a paper he wrote in 1896. Joseph Jules Francois Felix Babinski (1857–1932) was a French neurologist in Hospital de Salpetriere in Paris. It was he and his colleagues (including Jean Martin Charcot,

of Charcot's joints), who made the hospital a world famous medical centre at the turn of the century. Babinski was described by his colleagues as a loner, and during his detailed neurological examinations, he was said to have never uttered a single word. Babinski was Charcot's favourite student, and when Charcot died, Babinski did not seem to be able to climb the academic ladder. However, this was to be a blessing in disguise. In 1895, Babinski left to practise in a neighbouring hospital, where he had no teaching duties, leaving him more time for neuropathology research, co-discovering various brain syndromes which still bear his name (for example, Babinski-Nageotte syndrome, Babinski-Frolich syndrome), and some which do not bear his name (for example, Argyll-Robertson's pupil). Babinski's article on the abnormal reflex was characteristically very short, only 26 lines. Babinski lived in Paris with his brother Henri, an engineer and a famous cook, who wrote cook books under the pseudonym Ali Baba. In the last few years of his life, Babinski developed Parkinson's disease. The last line in his obituary in the *Lancet* read: "None of Charcot's pupils is surer to be remembered for his achievements in the field of neurology". Babinski is buried in the Cimetiere des Champeaux at Montmorency, 13 km from Paris.

One last method of eponymy I would like to mention is by verb derivation, for example 'to kocherise' (an operative technique where the duodenum is opened to expose the ampulla). Emil Theodor Kocher (1841–1917) was a Swiss surgeon, who won the 1909 Nobel Prize in Physiology or Medicine for his work in the physiology, pathology and surgery of the thyroid gland. Together with Joseph Lister and William Halstead, they improved surgical mortality and ended the era when surgeons were regarded as good only if they are rapid and spectacular.

Some eponyms are famously confusingly spelt. Graves disease is named after Robert James Graves, and should never be spelt as Grave's disease. The childhood renal tumour is named after Max Wilms, and should also not be spelt as Wilm's tumour. The syndrome caused by

trisomy 21 is either Down syndrome or Down's syndrome, and not Downs' syndrome, because it is named after John Langdon Haydon Down. The fracture of the distal fibula and tibia is Pott's fracture, and not Potts' fracture, being named after Percivall Pott.

Some eponyms are confusing because while they are double-barrelled, they actually refer to one person. Thus the Marcus Gunn pupil is named after Robert Marcus Gunn; the Bence Jones protein is named after Henry Bence Jones; the Ramsay Hunt syndrome is named after James Ramsay Hunt; the Austin Flint murmur is named after Austin Flint; and the Graham Steell murmur is named after Graham Steell.

Some eponyms are not truly eponyms, because the noun used is not actually the name of a person. Caisson's (or more correctly Caisson) disease (decompression sickness) is not named after someone called Caisson, but after the caisson – a watertight, pressurised structure which is used to work in, under water (for example, during the building of the foundation of a dam). Construction workers working in caissons brought up too quickly would develop decompression sickness (like divers who surface too quickly). 'Plantar warts' refer to warts on the sole of the foot, and should not be spelt as Plantar's warts.

Another problem is that some eponyms do not refer to the same person. Thus the Pick cell (foam cell), Pick's disease (a neuro-degenerative disorder) and Pick's pericarditis were named after, respectively – Ludwig Pick (a German pathologist), Arnold Pick (a Czech psychiatrist), and Friedel Pick (a Czech-Austrian physician).

Some eponyms are just difficult to know how to really spell because they are actually foreign words that have diacritics (which I have conveniently left out in some instances in this article). Some eponyms are just plainly too difficult to remember how to spell – like Kupffer cell, Kuntscher nail, Papanicolaou smear, and the number one on my hate list of eponyms to spell, Hirschsprung's disease.

Despite all these inconveniences, medical eponyms will continue to be used because there is a sense of history to their use. ■