ANGINA PECTORIS

–A Historical Overview (Part 3)

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This is the final instalment of a three-part series on the history of angina pectoris.The first instalment can be found in the August 2013 issue of SMA News (http://goo.gl/4zjzcv), and the second instalment can be found in the October 2013 issue (http://goo.gl/462EvF).

1794: Samuel Black (1764 - 1832)

Black graduated in Medicine from Edinburgh in 1786, and began practising in Northern Ireland around 1792.

Soon after starting practice, he saw a patient with angina who died in 1793. Autopsy showed features of an acute myocardial infarction ("a very unusually tender lacerable heart") and severe coronary disease.[1] In 1794, Black (who apparently did not know of Caleb Hillier Parry and Edward Jenner's work) published a letter in the *Memoirs of the Medical Society of London,* in which he stated his suspicion that angina was caused by coronary disease.

He wrote: "On examining the coronary arteries, I found … that they were completely ossified through their whole extent. … The more remarkable of the two … divides into two capital branches, the larger of which is a solid bone; the other … extremely osseous through its whole extent: and even the small ramifications … were completely indurated and inflexible."[2]

In 1796, Black published another letter regarding a separate case with the society, in which he wrote that the "primary and original cause of the disorder is, perhaps, in every instance, the ossification of the coronaries".[1]

1799: Caleb Hillier Parry (1755 - 1822)

Parry was an English physician who was friends with Jenner while they were in grammar school together. He studied Medicine in Edinburgh in 1773 and graduated in 1778. His MD thesis was on rabies. Later, he settled in Bath, where he became a dedicated and highly paid physician. Parry cared for Scottish surgeon John Hunter in 1785, when the latter, who was already suffering from angina pectoris, visited Bath. Unlike William Heberden, Fellowship of the Royal College of Physicians was not open to Parry as he was a religious dissenter. (Parry was later elected into the Royal Society in 1800, but this was due to his work on diseases in sheep and production of high quality wool.) Parry, Jenner and other friends set up the Medico-Convivial Society. During its first meeting, which took place in June 1788 at the Fleece Inn, Jenner presented a paper on mitral stenosis.[3]

In 1788, Parry requested for an autopsy on his patient, Rev Mr S, who suffered from angina. At a meeting of the Medico-Convivial Society in July 1788, he reported that the autopsy showed severe coronary disease, but his manuscript has not survived.

Still, there was confusion regarding the aetiology of angina. In 1791, in his publication, *A Treatise on the Disease Commonly Called Angina Pectoris*, English physician Dr William Butter (1726 - 1805) postulated that angina pectoris was caused by gout of the diaphragm, even though he had absolutely no pathological evidence of this at all.4 It should be remembered that at that time, gout was a great refuge in times of diagnostic difficulty, and there was a tendency to call any unclear illness "suppressed gout". Even French neurologist Jean-Martin Charcot (1825 - 1893, of "Charcot's joint" fame) ascribed angina pectoris to "gout of the heart" in 1867; and this was important to Charcot, because he suffered from angina and fainting spells.

In 1799, Parry published a book, titled *An Inquiry into the Symptoms and Causes of Syncope Anginosa, commonly called Angina Pectoris.* This was 17 years after Heberden had retired from medical practice in 1782. Unlike Heberden's account of angina based on 20, and later, 100 cases, Parry's account on angina was partly based on only three of his patients, and two other cases from Morgagni in 1761. Whereas Heberden's cases were what we would now consider to be typical angina, Parry's three cases (Mr Bellay, aged 56; Rev Mr S, aged 66; and Mr M, aged 77) had angina accompanied by fainting and a weak feeble pulse.

Morgagni's two cases (a nun and a 55-year-old man) also had fainting and feeble pulses. (These are symptoms of Stokes-Adams syndrome.)

Referring to Heberden's account, Parry wrote that "Dr Heberden asserts that the pulse is, at least sometimes not disturbed by this pain". Unlike Parry, Heberden did not relate angina to the heart because the pulse was unchanged during an acute episode. Parry thus disagreed with Heberden, writing: "I think it is evident that the angina pectoris is in reality a case of fainting; the syncope … the patient probably dies with no other symptoms than those which shew an irrecoverable diminution of the motion of heart", and went on to say that "that a principal cause of the syncope anginosa is to be looked for in disordered coronary arteries".[5] Unfortunately, what Parry had failed to appreciate was that Heberden's patients had symptoms initiated by exercise-induced tachycardia, while his patients had symptoms induced by bradycardia. Heberden in turn criticised Parry's "syncope anginosa", and attributed the fainting symptoms to "hypochondriacus et hystericus affectus". Despite this, until the late 19th century, the terms angina pectoris and syncope anginosa were synonymous.[6]

Parry's 1799 book was translated and distributed in Europe, but it did not receive much attention. Physician Jean-Nicolas Corvisart (1755 - 1821), one of the most important figures in French medical history, and who excelled in the use of chest percussion as a diagnostic tool, did not even mention ischaemic heart disease in his 1812 publication, *An Essay on the Organic Disease and Lesions of the Heart and Great Vessels*.

Parry suffered a stroke in 1816, and recovered with right-sided paralysis. He died in 1822. In 1825, Parry's son Charles published his father's writings, which included five cases of goitre with exophthalmos, and the first case had been seen in 1786. This condition was later named after Robert James Graves, who wrote about it in 1835, while Osler suggested that the condition should have been correctly called Parry's disease. Parry also described idiopathic dilatation of the colon, now called Hirschsprung's disease, after Harald Hisrchsprung who described it in 1888. Parry, a polymath, once said, "The most dangerous state incidental to the human mind is a calm acquiescence in the accuracy and extent of its own attainments."

1809: Allan Burns (1781 - 1813)

Burns was a brilliant pathologist (as pathologists tend to be) from Glasgow. In 1809 (at the age of 28), he published the book Observations on some of the most frequent and important diseases of the heart.[7] In it, he endorsed many of the views in Parry's 1799 book. Burns wrote: "If, however, we call into vigorous action, a limb, … its supply of energy and its expenditure do not balance each other; consequently, it soon, from a deficiency of … arterial blood, fails … A heart, the coronary vessels of which are cartilaginous or ossified, is nearly in the similar condition".[8] This formed the backbone of the concept of ischaemic heart disease due to coronary artery disease. Burns realised the danger of coronary artery disease, saying that "anaemia of the myocardium, due to coronary obstruction … must be a source of danger."[8]

This view was echoed by Dr Marshall Hall (1790 - 1857), an English physician and physiologist (who worked on reflex action mediated by the spinal cord). In 1842, Hall wrote: "Many facts induce me to believe, that the cases of sudden death arise chiefly from interruption of the coronary circulation!"[9] In fact, Hall linked heart failure (paralysis of the heart) to Parry's syncope anginosa, and this view was supported by English doctor Sir George Burrows (1801 - 1887) in his 1846 book, *On Disorders of the Cerebral Circulation and on the Connection between Affections of the Brain and Disease of the Heart*.

1813: John Blackall (1771 - 1860)

In 1813, Blackall, who was an English physician, published an article on a series of patients with angina who had undergone autopsy. This series must have included collected cases, because the first patient died in 1774, when Blackall was three years old.

In 1807, Blackall examined the coronary arteries of a 60-year-old patient with angina who died suddenly, and found that the coronary arteries showed severe calcification. Blackall acknowledged that there were no known cures for angina at the time, and recommended dietary measures and a form of therapy known as counter-irritation.[10]

1837: Sir Dominic John Corrigan (1802 - 1880)

Corrigan was an Irish physician who had been born in Dublin. He is most famous for the eponymous sign, "Corrigan's pulse", which refers to the collapsing pulse of aortic regurgitation. He studied Medicine in Edinburgh, where his classmates included William Stokes (of "Stokes-Adams syncope" fame). His MD thesis was on scrofula, or tuberculous cervical lymphadenitis. After graduation, Corrigan started practice, and eventually became a very famous doctor.

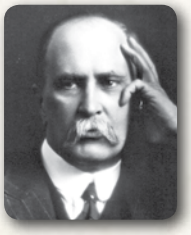
From 1830 onwards, Corrigan wrote more than 100 papers. In 1832, he published his famous paper on aortic regurgitation, about the pathology, symptoms and signs, the description of the pulse as "invariably full", and the therapy (generous diet, abstinence from alcohol, normal activity, and reassurance to the patient that sudden death was not a feature). In 1837, he published a paper where he postulated that angina was due to aortitis.[11] Corrigan had a great influence on those he taught. One of his teachings was that a physician must be "careful never to allow a patient to see him looking at his watch", that is, not to show haste in front of a patient. Corrigan suffered from gout, and died in 1880 from a stroke.[11]

1878: Adam Hammer (1818 - 1878)

Hammer was an Austrian physician. In 1878, he described the case of a 34-year-old man presenting with shock and bradycardia, but had no chest pain, and diagnosed it as a coronary embolism (when the patient was still alive). He thought that the suddenness of the course could only be explained by an abrupt interruption in coronary blood flow by thrombotic obstruction. When Hammer proposed this theory, a colleague exclaimed, "I have never heard of such a diagnosis in my whole life!" Hammer answered, "Nor I also." After the patient died, an autopsy showed complete occlusion of the left coronary ostium by a thrombus.

In 1887, Polish physician Edward Korczynski (1844 - 1905) published a paper titled "Coronary artery embolism diagnosed in a living patient". Later, in 1910, Russian physicians WP Obrastzow (1849 - 1920) and ND Straschesko (1876 - 1952) wrote a very precise description of a clinical presentation of coronary thrombosis.

1897: Sir William Osler (1849 - 1919)



In 1897, Canadian-born physician Osler published his "Lectures on angina pectoris and allied states". He thought that angina was not a common condition. Out of the 8,868 medical patients seen in Edinburgh Royal Infirmary between 1893 and 1894, there were only five cases of angina, according to Osler. In 1910, 13 years later, Osler published "The Lumleian lectures on angina pectoris" in the *Lancet*, and stated he had seen 268 cases of angina, which he defined as a disease "characterized by paroxysmal attacks of pain, pectoral or extrapectoral, associated with changes in the arterial walls, organic or functional".[12] Of the 268 patients, five had symptoms of Parry's type of angina, and the rest had symptoms of Heberden's type of angina.

1912: Dr James Bryan Herrick (1861 - 1954)

Although Herrick was an American physician and not British, he described the clinical features of sudden obstruction of the coronary arteries, and was the first to postulate that coronary thrombosis caused myocardial infarction (in his 1912 article published in *JAMA*).[13] Herrick stated that that by using the electrocardiograph (developed in 1903 by Willem Einthoven), a firm diagnosis of myocardial infarction could be established, and thus the autopsy would not be the only method to confirm this diagnosis.

1915: Sir Thomas Clifford Allbutt (1836 - 1925)

Allbutt was an English physician who is credited with invention of the clinical thermometer. In his two-volume book *Disease of the Arteries Including Angina Pectoris*, Allbutt supported Corrigan's view that angina was due to aortitis. SMA

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