

# ANGINA PECTORIS

— *A Historical Overview (Part 2)*

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*This is the second 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>).*

## **1768: Nicolas Francois Rougnon de Magny (1727 - 1799)**

**R**ougnon was a French physician who was appointed Professor of Medicine at University of Besancon in 1759. In March 1768, four months before Heberden's presentation at the College of Physicians, Rougnon published a letter he had written to Dr Anne-Charles Lorry (1726 - 1783; known primarily for his work in Dermatology), at the Faculty of Medicine, University of Paris. Dr Lorry had been his fellow student in Paris. The letter concerned Capt Charles, a retired cavalry officer and the son of a former professor at the University of Besancon.

A few years before his 50th birthday, Capt Charles had retired from the army in apparent good health. After retirement, he led a sedentary lifestyle, put on weight, and had multiple episodes of fever and jaundice. For some years, he had increasing difficulty in breathing, until he could no longer walk 100 yards without feeling suffocated, which could only be relieved by rest. Six weeks before his death, he saw Rougnon and complained of breathlessness and a feeling of constriction on the front of his chest, as if he were wearing a breastplate.

On 23 February 1768, after having lunch with some friends, he set out for another gathering at a house 700 yards away. He was late, and hurriedly walked there. When he reached the house, he suddenly leaned against the door, but rejected a servant's offer to help him. He hurried up two flights of stairs and took a seat. His friends found him to be "oppressed", carried him to another room, and then realised he was dead. There was no mention of chest pain in the case history.

Capt Charles' autopsy was done by a surgeon the next day, in the presence of Rougnon and other physicians. It was noted that the chest was difficult to open because the costal cartilages were ossified. The pericardium and diaphragm were said to be covered by fat. The heart was described as being one third larger than normal, and the right ventricle and atrium were dilated. Some thought the vena cava was dilated, but others disagreed. The coronary veins were said to be varicose, but there was no mention of the coronary arteries. The liver was enlarged, but the brain was normal. During and after the autopsy, the people present were said to have engaged in a lively discussion. Rougnon concluded that the ossified costal cartilages had interfered with inspiration, preventing blood flow in the lungs, causing stasis of blood in the right side of the heart, which struggled against the obstruction of blood flow in the lungs, until there was no blood flow to the lungs and left ventricle.

In 1897, Osler reviewed Rougnon's letter and was of the view that the case was one of angina. He cited the title of the letter as "*Lettre sur une maladie nouvelle*" – meaning "Letter about a new disease"; and the phrase "a hitherto unknown disease" was used to describe Rougnon's findings in this letter. However, a photocopy of the letter at the Royal College of Physicians showed the title to be "*Lettre de M. Rougnon a M. Lorry*" ("Letter from Mr Rougnon to Mr Lorry"). However, other eminent physicians who had reviewed the letter around the same time as Osler thought that Capt Charles had suffered chronic lung disease, with heart failure and pulmonary hypertension.

As Rougnon's letter predated English doctor William Heberden's presentation by four months, French neurologist and cardiologist Prof Henri Huchard (1844-1910) proposed that the disease should be called Rougnon-Heberden disease in 1899.

### 1772: John Wall (1708 - 1776)

Wall was an English physician who became very wealthy due to his large private practice in Worcester. He was one of the founders of Royal Worcester, one of the oldest British pottery brands still in existence today.

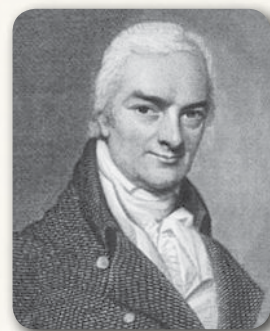
At about the same time that Scottish pathologist John Hunter (see below) was doing the autopsy on the unknown letter writer, another autopsy was done in May 1772, on Wall's 66-year-old patient who had angina (one of 12 or 13 angina patients seen by Wall).<sup>1</sup> Wall studied the natural

history of angina pectoris in his patients and stated that one was living, two were "carried off by other disorders; all the rest died suddenly".<sup>1</sup>

Wall stated that the 66-year-old patient had experienced increasing tightness across the breast and arms while walking for six to seven years before death. The autopsy showed a heart of "uncommon size", and there was ossification of the semilunar valves (aortic stenosis). Following the autopsy, Wall wrote: "It is possible that this condition of the semilunar valves may not be always the cause of the disease, though it seems not improbable that some malformation of the heart or vessels, immediately proceeding from it, may do so."<sup>1</sup> Wall was thus the first physician to ascribe angina to heart disease. He informed Heberden of his findings by letter, and also wrote a report for the same College of Physicians meeting in November 1772 where Heberden had presented the autopsy findings of the unknown writer. Wall's letter was published in *Medical Transactions* by the College of Physicians in 1785.

### 1773: John Haygarth (1740 - 1827)

Haygarth was an English physician in Chester who distinguished himself for his contributions to the prevention of contagious diseases, particularly smallpox. In 1773, Haygarth read a paper at the College of Physicians about an autopsy on a patient whom he had earlier diagnosed with angina pectoris. Ironically, Haygarth's death in 1827 was attributed to angina pectoris from a mediastinal abscess.



### 1786: Edward Jenner (1749 - 1823)

In 1786, one of Jenner's patients, a Mr Carter who had angina pectoris, died. In a letter to English physician Caleb Parry, Jenner wrote that he suspected that angina pectoris was a result of coronary artery disease after his second dissection: "I was making a transverse section of the heart pretty near its base, when my knife struck against something so hard and gritty, as to notch it. I well remember looking up to the ceiling, which was old and crumbling, conceiving that some plaster had fallen down. But on a further scrutiny the real cause appeared: the coronaries were become bony canals. Then I began a little to suspect. Soon afterwards, Mr Paytherus (Thomas Paytherus, a surgeon from Ross-on-Wye, a colleague of Parry and Jenner) met with a case (of an autopsy of a patient who had angina). Previously to our examination



of the body, I offered him a wager that we should find the coronary arteries ossified."<sup>2</sup>

The arteries were indeed hardened ("cartilaginous obstruction") but not ossified, and Jenner lost his bet.

By 1799, Jenner believed that in the autopsy of Heberden's patient done by Hunter in 1772, the coronary arteries had not been examined (although Hunter recognised that aortic stenosis could cause angina).<sup>3</sup> Jenner was so sure that he knew the cause of angina pectoris that he told Heberden of his opinion. Heberden was now Hunter's personal physician, and Jenner was concerned because Hunter had angina. Jenner wrote: "the importance of the coronary arteries and how much the heart must suffer from their not being able duly to perform their functions ... it is possible that all the symptoms may arise from this one circumstance".<sup>1</sup>

It is interesting to note that Jenner's opinion that angina pectoris was related to coronary artery disease was criticised by John Collins Warren (1778 - 1856), an American surgeon and pathologist. Warren studied at Guy's Hospital in London (with Sir Astley Cooper, of "Cooper's fascia" of the spermatic cord fame), in Edinburgh, and in Paris (with Baron Guillaume Dupuytren, of "Dupuytren contracture" fame). Warren was the first surgeon to publicly demonstrate the use of ether anaesthesia.

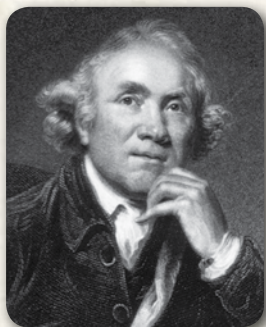
Warren could not understand why the presence of coronary artery disease did not always produce symptoms. Reporting an autopsy he performed, Warren wrote: "The coronary arteries ... were ossified. How far does the existence of this ossification in this and other cases related by different authors, without the symptoms of angina pectoris, disprove the opinion that it is the cause of that disease?"<sup>4</sup>

### 1793: John Hunter (1728 - 1793)

**H**unter was an eminent Scottish surgeon, anatomist and pathologist. In 1767, to study venereal disease, Hunter intentionally infected himself with gonorrhoea (and with syphilis unknowingly), using a lancet with pus from a gonorrhoea patient to puncture his own foreskin and penile glans. (There is some evidence to suggest that Hunter did not inoculate himself, but another person.)

Hunter said that he had performed thousands of postmortem dissections, but most of the records have been lost. Most of the remaining ones are limited to 1783.

Hunter's heart became part of his mythology as his colleagues talked about his heart condition. His symptoms began around 1773. Then, he had severe epigastric pain and pallor, and described himself as having "the appearance of a dead man". That first episode lasted two hours. Hunter



was well until 1777, when he had severe vertigo. He went to Bath where Jenner diagnosed that he was suffering from angina pectoris. Hunter continued to have angina (until the end of his life). In 1785, Hunter had prolonged angina related to exertion. He visited Bath again, and Jenner's friend Caleb Parry looked after him. By 1789, Hunter's angina had become very severe, and it was occurring at night. His angina was often associated with dizziness, visual disturbances, loss of memory, and a weak or absent pulse. Hunter's prolonged episodes of severe bradycardia have been attributed to sick sinus syndrome.

Hunter's sudden death occurred in October 1793, at the age of 65. While at St George's Hospital, some things "irritated his mind ... he gave a deep groan and dropped down dead".<sup>5</sup> (It is apt that one of Hunter's often quoted aphorisms reads: "My life is in the hands of any rascal who chooses to provoke me.")

Hunter's autopsy was performed by his brother-in-law, surgeon Sir Everard Home (1756 - 1832). Before his death, Hunter had asked for his heart to be retained for examination, but Home did not honour this request. The autopsy showed advanced generalised atherosclerosis, with calcified coronary arteries and ossified internal carotid and vertebral arteries. In a Hunterian Oration in 1925, surgeon Sir D'Arcy Power stated that Hunter died of syphilitic disease of the arterial system, that the angina pectoris was due to this, and that Hunter had cerebral syphilis. However, it is thought that Hunter probably had mitral and aortic stenosis, and a poststenotic dilatation of the aorta, rather than luetic aortitis. **SMA**

### References

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*All Prof Cuthbert Teo is trained as a forensic pathologist. The views expressed in the above article are his personal opinions, and do not represent those of his employer.*