Profiles in Cardiology

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James Wardrop

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Although James Wardrop (Fig. 1) is now better known for his contributions to ophthalmology, he is included in the *Profiles in Cardiology* series because he published important books on heart disease and aneurysms.

Wardrop was born on August 14, 1782, at Torbane-Hill, Linlithgow, Scotland.^{1–3} After receiving his preliminary education at Edinburgh, he became an apprentice to his uncle, Andrew Wardrop, a prominent surgeon in that city. When he was nineteen, Wardrop was appointed house surgeon at the Edinburgh Royal Infirmary, one of Europe's leading medical institutions.⁴ Wardrop moved to London in 1802, where he attended the lecture courses of John Abernethy and Astley Cooper. He also studied medicine at three of London's leading hospitals: Guy's, St. Thomas's, and St. George's. Wardrop supplemented his training by touring hospitals in Paris, Vienna, and other continental centers of medical education.

After completing his foreign studies, Wardrop returned to Edinburgh where he entered practice. Although he was elected a fellow of the College of Surgeons of Edinburgh, Wardrop concluded that his professional opportunities in the Scottish metropolis were limited, and so he returned to London in 1808. There, his practice and reputation grew steadily, and he was elected a member of the Royal College of Surgeons of London in 1814.

In 1826, Wardrop founded the West London Hospital of Surgery, where he lectured and demonstrated surgical techniques to interested students and practitioners. These practical courses were very popular. Dozens of physicians and surgeons, including several from the continent, attended the

weekly demonstrations in the hospital's amphitheater to see Wardrop operate. Eventually, he also lectured on surgery at St. Bartholomew's Hospital and at the Great Windmill Street School of Medicine.

Wardrop published *On Aneurism, and its Cure by a New Operation* in 1828.⁵ The book included sections devoted to the pathology of aneurysms, the techniques that Hunter and Brasdor had developed to treat them, and the surgical approach that Wardrop had devised to attempt to cure them. Although Wardrop advocated surgical treatment for aneurysms, he acknowledged that many aneurysms were in locations that were inaccessible. His innovation was to ligate the branches of a diseased vessel distal to the aneurysm in an attempt to reduce the flow of blood through the aneurysm. This, in turn, would favor the development of thrombus within the aneurysm, thereby diminishing the risk of rupture or progressive expansion.

Wardrop published his first book on heart disease in 1837.⁶ A greatly expanded second edition entitled *On the Nature and Treatment of the Diseases of the Heart* appeared 14 years later.⁷ The first part of Wardrop's book demonstrates his interest in the relation of cardiac function to the respiratory and nervous systems. His conclusions reflect an appreciation of the complex physiologic relationships of the heart, lungs, and brain.

Wardrop emphasized the importance of accurate diagnosis. "The diagnosis of diseases," he wrote, "may be considered as the stepping-stone to their treatment."^{7a} Although he was not a strong supporter of auscultation, he thought the procedure could help a physician make the correct diagnosis. At a time when many prominent clinicians still debated the value of the stethoscope (introduced a generation earlier by Laennec), Wardrop told his readers: "Notwithstanding all that may be said against auscultation, we ought not ... deny the utility of the information to be derived from it."^{7b}

Wardrop was frustrated with the state of therapeutics and contended that advances in the treatment of heart disease were not "at all commensurate with the progress of physiological and pathological science."^{7c} His approaches to treatment reflected a blend of late eighteenth and early nineteenth century views on the pathophysiology of heart disease. Wardrop wrote a book on bloodletting in 1835,⁸ and his monograph on heart disease published 16 years later revealed his continued enthusiasm for the practice:

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FIG. 1 James Wardrop, 1782–1869. From the collection of W. Bruce Fye.

Bloodletting may be considered one of the most valuable curative means in the treatment of diseases of the heart ... There is almost no malady to which the heart is liable, wherein bloodletting is not useful during at least some period of its progress.^{7d}

Although many leading clinicians of Wardrop's era shared his enthusiasm for bloodletting, the popularity of the procedure was declining steadily.

Wardrop discussed diseases of the pericardium, myocardium, and endocardium in his comprehensive 587-page book. With respect to coronary artery disease, he explained,

When the coats of the coronary arteries are diseased, it must often happen that the heart, not being supplied with its wonted [sic] quantity of blood, its muscles be-

come pale and flaccid, and unfit to carry on vigorously the circulation; and consequently arise an assemblage of symptoms ... to which the name of *angina pectoris* has been given.^{7c}

Like his contemporaries, Wardrop did not attribute angina exclusively to coronary artery disease. Although acute myocardial infarction was not recognized as a distinct syndrome until the early twentieth century, Wardrop did link myocardial dysfunction with coronary artery disease.

Wardrop closed his book with an apology: "I have earnestly to express the hope, that the indulgent reader will not reproach me for its numerous imperfections."^{7f} Contemporary and more recent reviews of Wardrop's book were mixed. British cardiologist and historian Evan Bedford remarked in 1962 that while Wardrop's book included "much of interest and originality" it was "tedious."⁹ A revised edition of his book on heart disease appeared in Edinburgh in 1859. Wardrop died in London on February 13, 1869.

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