Profiles in Cardiology

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Antonio di Paolo Benivieni

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Antonio di Paolo Benivieni (Fig. 1) was born in Florence, Italy, on November 3, 1443, at the dawn of the Italian Renaissance. He was a boy when German printer Johann Gutenberg published the first book using moveable type and a middle-aged man when Christopher Columbus discovered America. Antonio’s father, a nobleman and notary, was a member of a prominent and wealthy Florentine family, so he had extraordinary educational opportunities. Young Benivieni studied medicine at the Universities of Pisa and Siena after being educated in Florence by tutors.

After completing his medical studies, Benivieni returned to Florence where he practiced medicine for more than three decades. His peers considered him a skilled diagnostician and praised his ability to treat difficult cases. As Benivieni’s reputation spread, some of Florence’s most influential families became his patients or sought his opinion on specific problems. Eventually, he cared for many prominent Florentines, including the Medicis.

Benivieni’s most enduring contribution was his book De abditis nonnullis ac mirandis morborum et sanationum causis (On some hidden and remarkable causes of disease and recovery). Published posthumously in 1507 by Benivieni’s brother Girolamo and the physician-philosopher Giovanni Rosati, it contained 11 chapters that included about 200 brief case reports. Girolamo explained in his preface to the book that his brother had jotted down the fragments during more than 32 years of active medical practice. The original manuscript, rediscovered in 1855 by Italian historian Francesco Puccinotti, reveals that Benivieni’s brother and the publisher (Filippo Giunti) omitted several dozen case reports from the printed book.

British historian Charles Singer translated Benivieni’s book into English in 1954, making the text more accessible to physicians and historians. The book provides useful insight into the context and content of medical practice of urban Italian medical and surgical practice in the late fifteenth century.

Like other European physicians of his time, Benivieni was a Galenist. His anatomical concepts and his therapeutic approaches reflected the teachings of the ancient Greek physician. Medical treatments included the administration of various herbs and phlebotomy using lancets or leeches. In his book, Benivieni briefly described several surgical procedures such as operating on a baby with an imperforate anus, cauterizing an artery to prevent exsanguination in a man wounded during a fight, and removing a bladder stone that had caused anuria.

Although Benivieni was primarily a clinician, many medical historians have considered him a founder of pathology. His book includes summaries of twenty autopsies he performed in an attempt to clarify the clinical findings and the cause of death. Benivieni was not the first Renaissance doctor to perform autopsies for this purpose, however. By the late fifteenth century, there was increasing interest in dissection and clinico-pathologic correlation as some physicians began to question Galen’s teachings.

Benivieni briefly described the pathologic findings in patients found at autopsy to have had intestinal perforation, gall stones, urinary obstruction due to bladder cancer, and syphilis (which had recently appeared in Europe). Some of Benivieni’s case reports related to patients on whom he had operated. At the time, surgery was limited mainly to the treatment of superficial disorders and fractures, however. The great Italian pathologist Giovanni Battista Morgagni (1682–1771) cited several of Benivieni’s cases in his own classic collection of clinico-pathologic correlations De sedibus et causis morborum per anatomen indagatis, published in 1761.

Historians have held different opinions about Benivieni’s significance and that of his book. American medical historian...
Ralph Major characterizes him as a "pathfinder in medicine who blazed a new path which physicians waited for more than two centuries to follow" (quote p. 749). But British historian of science Lynn Thorndike argues that Benivieni's case reports "merely continue the tradition long established by the more elaborate Consilia of physicians of the preceding two centuries" (quote p. vol. 4, p. 586). Thorndike also disputes the claim that Benivieni was a pioneer in performing autopsies in an attempt to discover the etiology of his patients' symptoms and the cause of their death. He explains that the importance of Benivieni's little book "appears to have been exaggerated by past historians of medicine; partly perhaps because it was more accessible in print, easier to read, and better known than earlier and more elaborate works in manuscript" (quote p. 590).

Benivieni died in Florence in 1502. Although it may be unjustified to term him the father of pathologic anatomy, he surely helped to establish the tradition of clinico-pathologic correlation that led eventually to many important discoveries.

References