The First Pathology Book and Its Author

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Jean Francois Fernel history of medicine first pathology text history of medicine

The practice of medicine from the time of Galen (131–200 A.D.) to the thirteenth century was an accepted occupation of male members of religious orders. The church prohibited the use of instruments and the dissection of bodies was outlawed. The seriousness of a disease was estimated according to the phases of the moon and the position of stars in the firmament. The planning of treatment followed the same principles, reflecting written and unwritten superstitions [1].

This was the medical situation from ancient times to the birth of Jean Francois Fernel in 1497, four years after Columbus returned from America. Fernel was a diligent but reclusive student. He completed his college education in Paris in 1522, the year that Magellan completed his voyage around the world. After graduation, Fernel devoted himself to reading the works of Cicero, Aristotle, and Plato. Being in a dismal financial situation, he was advised by friends to become a priest, an attorney, or a physician. Fernel decided to study medicine, and while in medical school, he supported himself by teaching philosophy, mathematics, and Latin at a college [2]. He also wrote two treatises on astronomy and a book on mathematics [3].

In 1530, Fernel received his M.D. degree, but he did not begin to practice medicine for several years, because he was preoccupied with making astronomical instruments, astrolabs, to determine the altitude of the sun and other celestial bodies. After his father-in-law ceased to provide financial support for such astrometrical research, Fernel started to practice medicine and he undertook the dissection of animals and human cadavers [2].

In 1542, Fernel published his first medical book, On the Natural Part of Medicine [4], which introduced the term "physiology," and provided the first descriptions of the central canal of the spinal cord and of the peristaltic motion of the intestine. Fernel also wrote a short monograph that argued against excessive blood-letting, which he considered to be analogous to excessive wine-drinking. Both practices were acceptable in moderation, but in excess they could lead to disaster [5]. Another book, On the Hidden Causes of Things [6], appeared in 1548.

In his books, Fernel commented that he had at one time thought favorably of astrology, but his researches had convinced him that superstitions, sorcery, magic, and the occult should be condemned. He espoused the new renaissance thinking that was spreading from Italy to France after the publication in 1543 of De Revolutionibus by Copernicus, a Polish astronomer who had been trained in Italy. Fernel became convinced that nothing functioned outside the laws of nature and he believed that physicians were obligated to search for the causes of diseases [1].

A comprehensive summary of Fernel's thought was published in 1554 in his book entitled Medicina [7], which introduced the term "pathology." The book was an instant success. It opened prestigious doors to Fernel; he soon became physician to King Henri II of France and his mistress [2]. The pathology section of the book was so well received that it was reprinted as a separate volume in 1555 [8]. In this, the first systematic treatise on pathology, Fernel classified the diseases of single organs and those that affected multiple organs. The book contained numerous first descriptions, including influenza-associated (viral) encephalitis, perforated appendicitis, ulcerative endocarditis, intestinal obstruction by tumors, necrosis of intestine that was entrapped in a hernia, and lead poisoning. Fernel differentiated true from false aneurysms and he implicated syphilis as a cause of aneurysms. He concluded that everything that caused symptoms of illness belonged to pathology and he stressed the importance of correlating clinical and necropsy findings [8]. His books, Medicina and Pathologiae, written in Latin, were translated into English in 1575 and into French in 1579; they were reprinted at least 30 times during the next two hundred years.
In 1558, Fernel died at age 61 of an acute fever, shortly after his wife had died of the same fever. At his autopsy, an enlarged and infarcted spleen was found. Fernel is buried in Paris in the Church of St. Jacques-la-Boucherie [2].

Fernel contributed to medicine in many important ways. Not only did he write the first pathology text, but Fernel had the conviction and courage to extinguish, single-handedly, the influence that Galen’s theories had exercised on medicine and surgery for thirteen centuries [1,9]. Fernel’s accomplishments were officially recognized in 1794 by the young French Republic, when it issued a medal to commemorate the unity of medicine and surgery. The medal bears the portraits of Fernel and the famous French surgeon, Ambroise Paré (1510–1590) [1,2].

As an afterthought, it is interesting to note that Fernel’s contributions to pathology were not even mentioned by Morgagni in his De Sedibus [10], which was published in 1761, 200 years after Fernel’s Pathologiae [8].

Fig. 1.
Frontispiece of the 1645 edition of Fernel’s pathology book. Fernel is featured standing on the left. His head is covered with the four-cornered physician’s cap.

References

10. Morgagni GB. De Sedibus et Causis Morborum per Anatomen Indagatis Libri Quinque. Typog Remondiniana, Venice, 1761. Google Scholar