A Note from History:
Rediscoveries in Pathology and Laboratory Medicine

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Keywords: history of clinical science, history of pathology, rediscoveries in medicine

This paper delineates some of the mistakes that have been made in assigning the priorities of discoveries in clinical science. Compiling and selecting the entries described below from sources too numerous to list took me across political, linguistic, and cultural boundaries. Any omissions in my compilation were unintentional; they reflect the fact that most discoveries in clinical science are an outcome of the work of many observers, often stretching back for decades or centuries.

In 1849, Thomas Addison reported an anemic condition in association with adrenal hemorrhage, later named “Addison’s disease” and “Addisonian pernicious anemia.” Although this was an important contribution, it was Addison’s fellow countryman, James Combe (1796-1883), who reported (1824) the first case of pernicious anemia [1]. To make matters confusing, in continental Europe the reports by Combe and Addison were ignored and pernicious anemia was known as “Biermer’s disease” for decades after the publication of a paper by Anton Biermer, a Swiss physician, in 1872.

An ovarian tumor was described in Germany by Fritz Brenner in 1904, and since has been known eponymically as “Brenner’s tumor.” The priority, however, belongs to another German physician, Ernst Orthmann (1858-1922), who published in 1899 not one but two papers on tubo-ovarian tumors [2,3] in which he described and illustrated the tumor that was rediscovered by Fritz Brenner.

Rudolph Virchow, an eminent German pathologist, is often remembered for his erroneous claim, in 1858, that carcinoma cells (malignant epithelial cells) arise from connective tissue. Actually, the same erroneous statement was made in 1802 by a distinguished French pathologist, Marie Francois Xavier Bichat (1771–1802) [4].

Rudolph Virchow is best known, perhaps, for his time-honored observation, published in 1858, that cells come from cells. The problem is that Lorenz Oken (1779-1851), a German physician-physiologist, published a book in 1805 [5] in which he held that all organic beings originate from, and consist of, cells. Oken’s observation also preceded Theodore Schwann’s description of cells in 1838.
Julius Cohnheim's embryonic rest theory for the origin of cancer cells made him instantly famous upon its publication in Germany in 1877. What is generally unknown, even today, is that Joseph Récamier (1774–1852), a noted French gynecologist, presented a lengthy discussion of the same theory in his book on cancer in 1829 [6].

John Corrigan, an Irish physician, is credited with the description of insufficiency of the aortic valves and the associated “water-hammer pulse” in 1832. But it was Thomas Hodgkin (1798–1866) who gave the first description of aortic insufficiency in his seminal paper of 1828 [7].

Guillaume Dupuytren, a renowned French surgeon, devised an innovative surgical operation for palmar fibromatosis. But he was not the first to describe flexion contracture (fibromatosis) of the hand and fingers. The credit for the first description should go to Felix Platter (1536-1614), a Swiss physician, in 1614 [8].

Niels Stensen (1638-1686), a Danish anatomist and discoverer of the Stensen duct (excretory duct of the parotid gland), first described in 1671 a congenital abnormality of the heart [9]. That same abnormality was described in 1888 by Etienne Fallot, a French physician, and designated “Tetralogy of Fallot.” Moreover, two other physicians reported the same abnormality [10,11], long before Fallot’s account was published.

Johann Schreyer, a German physician, is given credit for the first demonstration (1690), in a much publicized legal case, that the lungs of newborn infants float on water if respiration has taken place after birth. Schreyer secured a verdict for the defense by proving that the case was not an abortion. Although the medical profession is indebted to Schreyer for his testimony in a forensic case, it was Jan Swammerdam (1637-1680), a Dutch physician, who first reported 23 years earlier that the lungs float on water after live birth [12].

Alfred Hand of the United States, Artur Schüller of Germany, and Henry Christian of the United States are credited for reporting, in 1893, 1915, and 1919, respectively, a new disease that became known as Hand-Schüller-Christian disease and later as histiocytosis-X. The first description actually belongs to a pathologist, Thomas Smith (1833-1909) of England, who not only reported the first case in 1865, but followed up his report [13] 11 years later with a concise description of the multifocal destructive bone disease [14].

In 1884, David Cunningham (1843-1914), a British army physician practicing in India, described microscopic bodies [15] that, after a report by William Leishman and Zakarias Donovan, in 1903, were known as Leishman-Donovan bodies.

It was, again, Rudolph Virchow of Germany who coined the term “leukemia,” but the first to describe it as a disease of blood cells was actually Alexandre Donné (1801–1878), a French physician-microscopist with an interest in cells and smear preparations [16,17].

Robert Brown, an English botanist, and Rudolph Wagner, a German naturalist, are credited with the discovery of the cell nucleus and nucleolus, respectively, in 1829 and 1835. The historical truth is that an Italian scientist-herpetologist, Felice Fontana (1730-1805), described nuclei and nucleoli in cells of the shedded skin of snakes in 1767 [18].

People argue about the date of introduction of the cervical-vaginal smear technique for detection of carcinoma of the uterine cervix. More important is the question: who did it? Undoubtedly, George Papanicolaou’s contribution to the introduction of the technique that he developed in New York City was substantial and epoch making. But it should be recognized that while he presented his smear technique (later named after him as the Pap Smear) at the Third Race Betterment Conference in January 1928, an article was then in press on the same topic. The article was published in the April 1928 issue of La Presse Medicale (Fig. 1). The author of the article was Aurel Babes (1886-1961), a Rumanian gynecology professor of Hungarian origin. In the article [19] he summarized his presentations at the January and April, 1927, meetings of the Gynecologic Society of Bucharest. The published article (Fig. 1) consists of four pages and nine figures illustrating various cytologic findings, including cancer cells, in smears obtained from the cervix and vagina. The priority of Babes’ report was the reason behind the Nobel Committee’s rejection of George Papanicolau for consideration for the Nobel Prize.

In 1707, Fredericus Ruysch (1638-1731), a Dutch anatomist, gave a description and illustration.
of an unique diverticulum of the terminal ileum. Johann Meckel, a German comparative anatomist, rediscovered the structure a century later, in 1809, which led to the entry of “Meckel’s diverticulum” in the annals of medical history.

John Legg (1843-1921), an English physician, described multiple hereditary telangiectasis in 1876 [21]. Decades later, Henri Rendu of France (1896), William Osler, of the United States (1901), and Frederick Weber of England (1907), rediscovered the same condition and left for us the eponym “Rendu-Osler-Weber disease”.

The name of a German pathologist, Friedrich von Recklinghausen, is associated with his 1882 description of multiple neurofibromatosis. However, multiple neurofibromatosis was first described in 1849 by an Irish physician, Robert Smith (1807-1873) [22].

Reed-Sternberg cells in Hodgkin’s disease are known to every student of pathology. What is unknown to most physicians is that it was not Dorothy Reed, an American pathologist, in 1902, nor Carl Sternberg, an Austrian pathologist, in 1898, who first reported the multinucleated giant cells that were named after them. The giant cells were first reported [23] by an English surgeon, William Greenfield (1846-1919), in 1878.

Readers who find this tally of rediscoveries far from complete are correct! As time and space allow, the recounting will continue.

References