

Karl Freiherr von Rokitansky (1804-1878)

During the nineteenth century, Karl Freiherr von Rokitansky conducted research on the causes of disease by performing approximately 30,000 autopsies, a practice that many people opposed at the time. Rokitansky performed his research in pathology, or the study of disease, and morbid anatomy, or the study of dead bodies, in Vienna, then part of the Austrian Empire and later part of Austria. In 1860, Rokitansky studied the growth of abnormal uterine tissue, and was one of the first to detect endometriosis, or endometrial tissue growth outside of the uterus, which helped future researchers further identify and understand endometriosis.

Rokitansky was born on 19 February 1804 in Hradec Králové, within the Austrian Empire and later part of Austria, to his mother, who had immigrated from Ireland and his father, Prokop Rokitansky. In 1818, Rokitansky began attending Charles University, then called the University of Prague in Prague, then Austrian Empire, to study natural philosophy. However, Rokitansky later moved to Vienna to pursue a career in medicine. According to historian Stewart Gilder, Rokitansky valued humanity and was concerned with fighting disease. In Vienna, Rokitansky began to study embryology and follow the teachings of Johann Friedrich Meckel, a professor of pathology. During the nineteenth century, embryologists had begun to use microscopes to analyze the ways in which different species developed. During a visit to the Vienna Pathology Museum in Vienna, then Austrian Empire, Rokitansky was exposed to the ways in which embryological development influenced the lives of women. Rokitansky graduated in 1828 with a dissertation titled *De variolide vaccina* (On the cow's smallpox).

After he graduated from the University of Vienna, Rokitansky began an unpaid position in the morbid anatomy group at the Vienna General Hospital. During the nineteenth century, scientists opposed to the idea of morbid anatomy and conducted little research on the topic. In 1830 Johann Wagner, a professor at Vienna General Hospital, took Rokitansky on as an apprentice. Together, Rokitansky and Wagner performed multiple autopsies, including an autopsy of composer Ludwig van Beethoven, to determine the causes of death for various individuals. According to Gilder, Wagner stated that Rokitansky showed great potential as a pathologist and regarded Rokitansky as a more talented pathologist than himself. According to historian Fernando Peixoto Ferraz de Campos, Rokitansky argued for exploratory autopsy techniques instead of the current practice at the time of looking at a small set of organs. During the nineteenth century, researchers analyzed diseases according to their outward effects on the body. Following Wagner's death in 1831, Rokitansky assumed Wagner's teaching position at the Vienna General Hospital. In 1834, Rokitansky married singer Marie Weis and the couple had four children named Hans, Viktor, Karl, and Prokop.

Throughout his career, Rokitansky wrote multiple papers on topics like pathology, surgery, and obstetrics. One of his most cited works is the 1846 *Handbuch der allgemeinen pathologischen Anatomie* (Handbook of Pathological Anatomy). That work consists of three volumes and includes Rokitansky's experience performing autopsies to try and determine how patients died in the absence of noticeable symptoms. For example, Rokitansky theorized that death may be related to various diseases of the blood. Doctors at the Vienna General Hospital utilized Rokitansky's methods for researching the causes of illnesses.

In 1848, the Austrian Academy of Sciences elected Rokitansky as one of the first medical representatives to its board. Then, in 1849, he became dean of the Medical Faculty of the board. In 1850, Rokitansky was elected president of the Medical Society of Vienna, headquartered in Vienna, a position he held for twenty-five years.

In 1860, Rokitansky began studying the diseases associated with a woman's uterus and ovaries.

Specifically, Rokitansky studied a uterine polyp, or an abnormal tissue growth in the uterus, which he had uncovered during an autopsy. Upon examining the uterine polyp under a microscope, Rokitansky found that the polyp resembled endometrial tissue from the uterus. Scientists consider Rokitansky's writing on the uterine polyp one of the first detections of endometriosis, a disease characterized by abnormal growth of endometrial cells that line the inside of the uterus, called endometrium, in other abdominal organs. However, Rokitansky was not the first person to coin the term endometriosis, nor did he establish endometriosis as a specific disease. Instead, in his publication titled *Ueber uterusdrüsen-neubildung in uterus-und ovarial-sarcomen* (Uterine gland formation in uterus and ovarian sarcoma) Rokitansky referred to the uterine polyps as cystosarcoma. In 1863, Rokitansky became the advisor of medical education at the University of Vienna.

Rokitansky contracted bronchitis and died on 23 July 1878 in Vienna after a sudden attack of chest pain.

Sources

1. Batt, Ronald. *History of Endometriosis*. Berlin: Springer Science & Business Media, 2011.
2. Ferraz de Campos, Fernando P. "The Dawn of Modern Pathology." *Autopsy & Case Reports* 6 (2016): 1-5.
3. Gilder, Stewart S. "Carl von Rokitansky, 1804-1878." *Canadian Medical Association Journal* 71 (1954): 70-2.
4. Nezhat, Camran, Farr Nezhat, and Ceana Nezhat. "Endometriosis: ancient disease, ancient treatments." *Fertility and Sterility* 98 (2012): 1-62.
5. von Rokitansky, Karl Freiherr. *Handbuch der allgemeinen pathologischen Anatomie*. Wien: Braumüller, 1846.
6. von Rokitansky, Karl Freiherr. *A manual of pathological anatomy*. Philadelphia: Blanchard & Lea, 1855. <https://archive.org/details/handbookofpathol00delaiala> (Accessed July 11, 2018).
7. von Rokitansky, Karl Freiherr. *Ueber einige der wichtigsten Krankheiten der Arterien* (Abnormal conditions of the arteries). Wien: Kaiserlich-Königliche Hof-und Staatsdruckerei, 1852.
8. von Rokitansky, Karl Freiherr. *Ueber uterusdrüsen-neubildung in uterus-und ovarial-sarcomen* (Uterine gland formation in uterus and ovarian sarcoma). Wien: Druck von Carl Ueberreuter, 1860.