

The Miracle of Anesthesia – II

Lead: Until 1846 the work of the medical surgeon was a gruesome, often brutal exercise in torture, but for seventy years the solution had been just a giggle away.

Intro.: *A Moment in Time* with Dan Roberts.

Content: With the invention of the ligature - the stitch - by a French military surgeon in the sixteenth century, the practice of surgery began to take on a certain scientific respectability. No longer was the

stump of an amputee dipped in boiling tar to seal the blood vessels nor were wounds cauterized with hot irons. They were sewn up. With the ability to close a wound as well as open it, a surgical operation might actually save someone's life on occasion. However, the strongest block to successful surgery was the pain it inflicted on the patient, or better said, the victim. Yet, after 1772, the solution, even though unrecognized for years, had at last become available.

In that year, Joseph Priestly, the English clergyman and chemist, who would later describe the gas now termed oxygen, isolated one of the

oxides of nitrogen, a colorless gas with a sweet odor and strange narcotic effect. He called it nitrous oxide. Later, another English chemist Sir Humphrey Davy, inhaled nitrous oxide and described its effects, first laughter, then euphoria and then, after prolonged use, relatively harmless and short-term unconsciousness. He suggested its usefulness for surgery, but few took him seriously.

Nitrous Oxide, or laughing gas as it came to be known, was something of a novelty in the early 1800s. It was the subject of public lectures and the source of entertainment among well-to-do socialites who would bring a

bag of the stuff to enliven their private parties.

In 1842, Crawford Long, a physician in Jefferson, Georgia, who had provided another form of laughing gas, diethyl or sulfuric ether to several parties for his friends, tried it during minor surgery on some of his patients. It worked. In 1845 a Connecticut dentist, Horace Wells tried nitrous oxide while one of his own teeth was painlessly removed. Wells failed in an attempt during a demonstrated tooth extraction at Massachusetts General Hospital, but the following year his friend and future rival for the honor of discovery, William Morton, returned

to Mass General and successfully used ether to induce controlled unconsciousness on two patients. Oliver Wendell Holmes, Sr., father of the famous jurist and an eminent surgeon, suggested a name, "anesthesia," and from that point the science of surgery began to make even greater contributions to the progress of medicine.

At the University of Richmond, this is Dan Roberts.

Resources

Fenster, J.M. "How Nobody Invented Anesthesia," *American Heritage of Invention and Technology* 12 (1, Summer 1996):www.inventionandtech.com/content/how-nobody-invented-anesthesia-1.

Pernick, Martin S. *A Calculus of Suffering: Pain, Professionalism, and Anesthesia in Nineteenth-Century America*. New York, NY: Columbia University Press, 1985.

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