

REVIEW ARTICLE

William Thomas Green Morton and the 180th Anniversary of Ether Anesthesia: A Historical and Scientific Appraisal

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ABSTRACT

The year 2026 marks 180 years since William Thomas Green Morton's public demonstration of ether anaesthesia on 16 October 1846 at Massachusetts General Hospital. This event is widely regarded as the formal inauguration of modern anaesthesia. Morton's translation of experimental observations into a reproducible clinical technique enabled the development of pain-free surgery and laid the foundation for modern anaesthesia practice. This article reviews the life of WTG Morton before and after his first successful public demonstration, which is largely unknown.

KEYWORDS

- WTG Morton, • Ether Anesthesia

INTRODUCTION

William Thomas Green Morton was born on August 9, 1819. He passed his youth alternating between school and farm work. Due to his father's financial constraints, he had to leave school at the age of seventeen and secured a position in a large publishing house in Boston. In 1840, at the age of 21, he was

enrolled as a student in the Baltimore College of Dental Surgery but left without obtaining a diploma. Before that time, he had tried his hand at business in the cities of Baltimore, St. Louis, and Cincinnati. He would forge letters of recommendation, buy goods on credit, sell them, and abscond with the money to the next place.^{1,2} It was in 1842 that the then 23-year-old Morton met Horace Wells for the

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first time in Hartford. Morton then decided to settle down and become a dentist under Wells' tutelage. He learned Wells' advanced techniques in prosthetic dentistry and moved to Boston. In March 1844, William Morton began studying medicine with Dr. Charles Thomas Jackson and later continued his studies at the Harvard Medical School. He did not complete Harvard's degree requirements, but in 1852 was awarded an M.D. degree "honoris causa" by the Washington University of Medicine, which later became the College of Physicians and Surgeons of Baltimore. While pursuing his studies and practicing dentistry at the same time as a means of earning the money necessary to continue his education, his attention was drawn vividly to the pain during dental operations. The suffering involved made a deep impression upon his mind, and he set about to discover some means to alleviate it. He learned about a failed demonstration of inhalational anesthesia by Horace Wells and then sought Dr. Charles Thomas Jackson's help as Dr. Jackson had demonstrated before his chemistry classes that inhalation of sulfuric ether causes loss of consciousness. Dr. Jackson suggested that Morton could improve narcotic inhalational vapor results by using chemically purified sulfuric ether instead of nitrous oxide. In the summer of 1846, he carried out experiments with goldfish, caterpillars, insects, and worms. He tried ether on his little spaniel dog, on two of his young dental apprentices, and even on himself. On September 30, 1846, at his office in Boston, he administered inhalational sulphuric ether to Eben Frost and painlessly extracted a tooth. The first public notice of this event appeared in the Boston Daily Journal of Oct. 1, 1846. This publication induced the eminent surgeon, Dr. Henry J. Bigelow, to visit Morton's office, and there he witnessed many painless tooth extractions by inhalations of ether vapor. He was very impressed with the magnitude of the event and the perfection of the method of anesthetic inhalation by Morton, and he at once warmly espoused Morton's desire to make a public demonstration.²

The Ether Demonstration of 16 October 1846

On Oct. 16, 1846, the first public demonstration of surgical anesthesia happened in an amphitheater of Massachusetts General Hospital (MGH), crowded with overflowing students, surgeons, and physicians. Morton

was pressed for time, and the initial apparatus, a glass globe containing a sponge to hold the ether, was quickly made by an instrument maker named Wightman. The initial apparatus was reportedly unsatisfactory, which contributed to delays, but Morton calmly administered diethyl ether via an inhaler until the patient, Gilbert Abbott with a neck tumor, exhibited loss of consciousness and lack of response to painful stimuli and, turning to Dr Warren, said, "Dr Warren, your patient is ready." The silence of the tomb reigned in the large amphitheater while Dr Warren made his first incision through the skin and dissected out a large tumor, while the patient made no sign nor moved a muscle of his body. When the operation was completed, Dr Warren turned to the audience and said slowly and emphatically, "Gentlemen, this is no humbug," and Dr. Bigelow, "I have seen something today that will go around the world." The event marked the advent of a new epoch in history, namely, the epoch of practical, painless surgery. Figure 1 is a painting by Robert C. Hinckley, "The First Operation Under Ether" depicting the public demonstration of October 16, 1846.



Figure 1: A painting by Robert C. Hinckley, "The First Operation Under Ether" depicting the public demonstration of October 16, 1846.

Dr Morton at that time was but twenty-seven years of age and still a student in the Medical School of Harvard University. Reports of the demonstration spread rapidly through medical journals and personal correspondence. With the discovery being announced, he was compelled to discontinue his studies to focus entirely on his work.

Controversies and Credit Attribution

Morton sought a patent for ether. Once the patent was conceded, he marketed the anesthetic agent as Letheon, a mixture of ether and oil of orange. The name is adopted from Lethe, the river of forgetfulness, which is one of the five rivers of the Greek underworld. The patent was officially granted on November 17, 1846, for his method of etherization, which used a glass jar with a rubber tube. Surgeons at MGH insisted on knowing the composition of the agent. By January 1847, it was discovered that tincture of orange and perfumes had been added to ether, and Morton's claim to his patent collapsed. Morton kept the true composition of Letheon a secret with the hopes of becoming wealthy. Following his historic ether demonstration in 1846, Morton spent much of the remainder of his life caught in professional conflict, financial struggle, and unrelenting efforts to secure recognition for his contribution to anesthesia. Although Morton had achieved global fame, he did not receive the financial rewards he expected. The last twenty years of Morton's life were spent in the perpetual torment of bitter controversy and litigation; as a result, he was reduced to poverty. Morton's decision to patent ether as "Letheon" generated significant professional opposition and contributed to decades-long disputes regarding priority. Morton's claim to priority was vigorously contested by Horace Wells, Dr. Charles Thomas Jackson, and, later, Dr. Crawford W. Long. These disputes consumed years of Morton's life, leading him to petition Congress for financial compensation. Multiple congressional hearings reviewed his application, but none resulted in a definitive award. However, the prolonged legal battles, combined with public criticism, put significant strain on Morton's personal and financial well-being.^[4] His dental practice declined, and the toll of ongoing litigation left him increasingly exhausted. In July 1868, while travelling near New York City with his wife, Morton suddenly became critically unwell. After reportedly experiencing acute symptoms described in contemporary sources as a combination of respiratory distress, agitation,

and cardiovascular collapse, he was taken to St. Luke's Hospital. William Thomas Green Morton died on 15 July 1868 at the age of 48. The precise cause of death remains debated, with proposed explanations including stroke, heatstroke, acute nervous exhaustion, or cerebrovascular accident precipitated by chronic stress.

Morton was buried at Mount Auburn Cemetery in Cambridge, Massachusetts. His monument bears the inscription:

"Inventor and Revealer of Inhalation Anesthesia: Before whom, in all time, surgery was agony; by whom pain in surgery was averted and annulled; since whom, science has had control of pain."

CONCLUSION

The 180th anniversary of Morton's ether demonstration highlights a pivotal moment in the history of medicine. Morton's work transformed surgery into a humane and scientifically rigorous discipline. Despite contemporary controversies, the evidence supports his central contribution to the establishment of clinical anesthesia. His achievement continues to underpin modern perioperative practice, representing one of the most important milestones in the evolution of global healthcare.

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