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Original Article

Accepting Pain Over Comfort: Resistance to the Use of Anesthesia in the Mid-19th Century☆,☆☆

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ABSTRACT

News of the successful use of ether anesthesia on October 16, 1846, spread rapidly through the world. Considered one of the greatest medical discoveries, this triumph over man's cardinal symptom, the symptom most likely to persuade patients to seek medical attention, was praised by physicians and patients alike. Incredibly, this option was not accepted by all, and opposition to the use of anesthesia persisted among some sections of society decades after its introduction. We examine the social and medical factors underlying this resistance.
At least seven major objections to the newly introduced anesthetic agents were raised by physicians and patients. Complications of anesthesia, including death, were reported in the press, and many avoided anesthesia to minimize the considerable risk associated with surgery. Modesty prevented female patients from seeking unconsciousness during surgery, where many men would be present. Biblical passages stating that women would bear children in pain were used to discourage them from seeking analgesia during labor. Some medical practitioners believed that pain was beneficial to satisfactory progression of labor and recovery from surgery. Others felt that patient advocacy and participation in decision making during surgery would be lost under the influence of anesthesia. Early recreational use of nitrous oxide and ether, commercialization with patenting of Letheon, and the fighting for credit for the discovery of anesthesia suggested unprofessional behavior and smacked of quackery. Lastly, in certain geographical areas, notably Philadelphia, physicians resisted this Boston-based medical advance, citing unprofessional behavior and profit seeking.
Although it appears inconceivable that such a major medical advance would face opposition, a historical examination reveals several logical grounds for the initial societal and medical skepticism.

Introduction

Henry Jacob Bigelow, MD's (1818-1890; surgeon and major supporter of the introduction of anesthesia, Boston, Massachusetts, USA), 1846 article announcing William Thomas Green Morton, MD's (honorary) (1819-1868; dentist, first public demonstrator of insensibility by inhalation of ether, Boston, Massachusetts, USA), demonstration of ether anesthesia at the Massachusetts General Hospital (MGH) has been hailed as the most influential article ever published in the *New England Journal of Medicine*.[1] Within 1 year, ether was used in Europe, Africa, India, China, Japan, and Australia.[2] Much of the publicity surrounding the breakthrough came from Morton himself, who began publishing a regular "Letheon circular" (Letheon was the name he gave to the vapor of sulphuric ether) with advertisements and testimonials from patients and practitioners.[3]

One would expect swift acceptance of such a miraculous advance. However, despite being bolstered by praise from Morton's patients, legitimized by the US government, and used widely in Boston, many leading physicians elsewhere in the United States remained skeptical. Numerous prominent surgeons and dentists decried the use of ether anesthesia to their colleagues in opinion pieces in medical journals and to the public in letters to the editors of daily newspapers. Pennsylvania Hospital, the country's oldest hospital and home of the first surgical theater, initially prohibited the use of anesthesia by its surgeons, "it being considered by the judicious surgeons in this institution as a remedy of doubtful safety." That ban was not revoked until 1853.[4]

The challenges to anesthesia ranged from clinical to religious and cultural, fueling debate, outrage, and public dialogue surrounding the fields of surgery and medicine. We explore the complex interplay between medicine and society, highlighting the fact that medical advances can only occur within the societal context.

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Fig. 1. On July 12, 1848, 15-year old Hannah Greener received chloroform during foot surgery and died 2 minutes into the case. Sheila Terry/Science Photo Library. Reproduced with permission.

Concerns About Safety

On September 30, 1846, Ebenezer Hopkins Frost (1824-1866) became WTG Morton's first identified patient to receive anesthesia.[5] The patient was slow to awaken after the short dental extraction, and Morton was worried that the unresponsive patient might have died. Cold water splashed on Frost's face promptly woke up the startled patient who inquired about when the procedure would start. As more anesthetics began to be administered throughout the country and the world, it was only a question of time before major complications, including death, would occur.[6,7] As newspapers and journals published reports of deaths under anesthesia, safety became a major reason for the initial skepticism about the many unknown side effects of this poorly understood treatment [8] (Fig. 1). Monitoring of patients under anesthesia was limited to measurement of pulse, observation of respiration and the color of the skin, and assessment of muscle tone.[9] Practitioners reported unpredictable effects of ether in its early days, with most of the correspondence focusing on convulsions or excitations of the central nervous system. Many wrote to journals to describe deaths of their patients secondary to hypoxia and asphyxiation.[10]

During this period, there were no clear guidelines for dosing, nor was there any uniformity in the apparatus used to administer ether or chloroform. John Snow, MD (1813-1858; epidemiologist and considered the first full-time physician anesthetist, London, UK), conducted pioneering work on physical properties of ether and chloroform[7,11,12]; however, this did not allay fear among physicians or the lay public. The early opposition cited fears of overdose, akin to alcohol poisoning, as a reason for avoiding anesthesia. Overdose was also feared when anesthesia was administered to children and to pregnant women, with concern of harm to the fetus.[13] There was also worry that anesthesia in a laboring woman would prolong recovery from labor and delivery.

Although early reports of the dangers of anesthesia were full of alarm, most of them were based, in fact, not on exaggerations deliberately designed to scare patients. Reports of sudden cardiac death appeared soon after the introduction of chloroform by Sir James Young Simpson (1811-1870; discoverer of chloroform anesthesia, Professor of Midwifery, University of Edinburgh, UK), in Edinburgh in 1847. Reported complications included incomplete anesthesia, madness, death, and a variety of medical problems.[14-22] England had a tradition of a coroner's inquest which attempted to obtain scientific medical evidence and provide an explanation for the death.[23] Unfortunately, lack of understanding about anesthesia meant that all deaths and complications were viewed as an indictment against the discipline, rather than the limitations of practitioners or characteristics of patients. Anesthesia was often cited as the obvious cause of death, even when death occurred 2 days after surgery.[14] Anesthetics were thought to poison the blood, cause hemorrhage, and delay union by adhesion.[24,25] Anesthetics were believed to result in bronchitis, pneumonia, and inflammation of the brain.[26] Other complications included thickening of the blood, suffocation, and abortion or poisoning of the fetus.[26,27] Both ether and chloroform were used in military conflicts—the Mexican American War,[25] the Crimean War,[28] and the Civil War.[29,30] Although anesthesia was used safely,[29] it would still carry the blame for poor healing,[25] and many military surgeons from the preanesthesia days still "characterized the cries of patients as music to the ears."[30] It was decades before the medical profession began to understand the side effects of anesthetics and began to investigate the etiology of complications. By the turn of the 20th century, medical students in England were yearning for more training to make anesthesia safer.[31] When British hospitals began teaching anesthesia during medical school clerkships, the Council of the Society of Anaesthetists expressed understanding that "the responsibility of giving anaesthetics involves risks to life."[32]

Modesty

Several factors discouraged some women from seeking pain relief with the newly introduced agents, ether and chloroform. Traditionally, the process of birthing occurred in the privacy of the home under the care of experienced midwives.[33,34] Early hospitals devoted to obstetrics usually catered to the needs of the poor and indigent, but women from the upper classes usually preferring delivery at home, sometimes with the assistance of a male physician.[35] Early midwives were almost always women,[34,36,37] and society accepted the reasonable idea that modesty dictated that it would be best if women provided care during labor and delivery, a natural process that has taken place without artificial means since time immemorial. Man-midwives appeared on the obstetrical scene in the 19th century, and physicians, almost always men, began to provide medical care during labor and delivery a few decades later.[27,34,36,37] Physicians who practiced obstetrics faced two problems—to prove that they were as good as medical physicians and surgeons and competition from midwives who considered the field of obstetrics and gynecology to be their domain.[38-40] The introduction of the speculum in the 19th century allowed physicians an opportunity to observe internal structures as never before and permitted better diagnostic and therapeutic options, but this advance created much debate even as physicians attempted to develop gynecology into a scientific discipline.[40] The debate over the speculum was primarily a moral argument, and medical issues were of secondary importance.[41]

Patients undergoing nonobstetrical anesthesia had other fears. Surgical theaters were a male domain, and many female patients considered it immodest to be unconscious in that setting (Fig. 2). These fears were confirmed when the Philadelphia Medical Examiner and other publications reported sexual exploitation during anesthesia.[42,43] As a result, women who would otherwise have opted to receive anesthesia instead chose surgery under poorly controlled analgesia.[26]