

Our Surgical Heritage: The Genesis of Painless Surgery

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ABSTRACT

Have you ever wondered about the first surgeons who operated on patients without anesthesia on fully conscious patients, screaming in excruciating agony and being held captive by their assistants? Fortunately, substances were being discovered that can cause pain when not felt. This manuscript will summarize the following first attempts at painless surgery.

Keywords: Chloroform, Ether, Inhalation anesthesia, laughing gas, Nitrous oxide, Painless surgery.

ABSTRACTO

¿Alguna vez te has preguntado acerca de los primeros cirujanos que operaban a pacientes sin anestesia en pacientes completamente conscientes, gritando en una agonía insoportable y cautivos por sus asistentes? Afortunadamente, se estaban descubriendo sustancias que pueden causar dolor al no sentirse. Este manuscrito resumirá. Los primeros intentos de cirugía indolora

Palabras clave: Cloroformo, Éter, Anestesia por inhalación, gas de la risa, Óxido nitroso, Cirugía indolora.

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INTRODUCTION

Have you ever wondered about the early surgeons operating without anesthesia on fully conscious, screaming patients in excruciating agony held forcibly by assistants? Examples include amputations, bladder stone removals through incisions in the perineum, and tumor excisions. For instance, reports abound of multiple surgeons, one by one, choosing to insert a metal sound through a patient's urethra into his bladder to confirm the presence of the stone. During the whole time, the patient continued screaming in agony.¹

A nurse, Frances Burney, had a mastectomy without analgesia. She "needed no injunctions not to restrain my cries" and screamed the whole time of the incision.²

From ancient times, Hippocrates knew about pain and used opium and other hypnotic (soporific) substances to relieve it.³ Substances like opium, the root of the mandrake (mandragora), leaves of hemlock, and certain parts of the henbane (*Hyoscyamus*) plant were boiled into a hypnotic sponge for inhaling its vapor and produced deep pain-free sleep. The patient still had to be tied or held down for surgery.

Witnessing surgery on the awake patient was an abhorrent sight. This turned many potentially gifted people away from it, the classic example being Charles Darwin.⁴

Several remedies were attempted thousands of years ago: alcohol, opium poppy, mandrake fruit, *Solanum* species with alkaloids in 13th century Italy, Coca leaves by Shamans in Incas, and "soporific sponges by Arabic physicians. Ether was first mentioned in the 16th century. In 1772, Joseph Priestley discovered nitrous oxide, while in 1779, Davy named the laughing gas.^{5,6}

WILLIAM THOMAS GREEN MORTON

Morton deserves the title of father of modern anesthetics.⁷ He noted that his patients had no pain when they breathed ether vapor to deaden tooth sockets.

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John Warren of Massachusetts General Hospital invited Morton to exhibit the substance. Morton had already modified his ether machine into a two-necked glass globe. One allowed the inflow of air. The other neck had a mouthpiece through which the patient inhaled air from the surface of an ether-soaked sponge in the globe.

On the morning of 16th October, the operation theater was crowded with surgeons and medical students. The patient was Gilbert Abbott, 20 years of age, who had a benign vascular tumor of the neck.⁷

Dr Warren prepared to operate. The patient lay silent, making no screams of pain, and had eyes closed as if in sleep while the surgeon was doing his work. The operation took 30 minutes, and at the end, Abbott agreed that the whole affair had been painless.⁷

The next patient was a 21-year-old servant girl, Alice Mohan, with tuberculosis of the knee joint. Drs George Hayward and Warren

and Bigelow were the surgeons. Morton administered the ether, and after some coughing, the patient fell into a deep sleep. She woke up to find her leg amputated painlessly.⁷

The next test was for the great Robert Liston to amputate a limb with chronic osteomyelitis of the tibia. The theater at the UCH was packed to capacity. The ether apparatus is held at the patient's nostrils. The patient never moves. Liston's huge left-hand grasps the thigh, and the upper flap is made; another thrust and the lower flap is cut. Amputation done, the stump was dressed.⁷

Morton spent his final years collecting remuneration for his contribution. He applied to Congress, unsuccessfully, for "national recompense" of \$100,000 in 1846, 1849, 1851, and 1853.

Morton did volunteer for the Army of the Potomac as a surgeon in the autumn of 1862. He applied ether and eased the pain of >2000 wounded soldiers during the battles of Fredericksburg, Chancellorsville, and the Wilderness.⁸

Morton died from a major cerebrovascular incident in New York City in July 1868 at 48 years of age. Recognizing him, the chief surgeon at St Luke's made the following remark to his students: "You see lying before you a man who has done more for humanity and for the relief of suffering than any man who has ever lived."⁸

AUTHOR'S NOTE: DEDICATION

The contributions of anesthesia and its crafters cannot be underestimated in the field of surgery. Recent advances in pre-, post-, and recovery phases of anesthesia have only augmented their role and added numerous dimensions to modern anesthesiology. Anesthetist-provided critical care is yet another frontier that is expanding beyond belief.

It is not easy, however, to be an anesthesiologist. An anesthesiologist must be able to lead a team with total commitment. He/she must be courageous and confident and also maintain consistency. Above all, a leader must have charisma. Charisma is trust in yourself, in your faculties, abilities, knowledge, and skills, so that you know you are equipped to the highest level to offer the highest level of service.

The author was privileged that he was the soulmate of a brilliant anesthesiologist who was the apotheosis of all of these Cs. Dr Leela Kriplani and I did parallel residencies in anesthesiology and surgery

and had ample opportunities to collaborate through 40 years. I had the pleasure of watching her develop a reputation, become a "go-to" person for difficult cases, and expertly accomplish blind nasotracheal intubations. She was in great demand from difficult surgeons (at times me). She was also superb with pediatric anesthesia. Residents-in-training, operating room nurses, and staff loved her.

Due to deteriorating health, Leela had to give up her profession in 2011 but kept up with her varied interests: reading, grandkids, board games (she used to be brilliant in Scrabble, Wordex, and of late, obsession with AI!) She was the undisputed matriarch of several of our related families. Unfortunately, her lung condition, APF, would not relent. Leela passed away on 9th November, leaving her family behind.

In loving memoriam, we dedicate this document to our beloved wife, mother, and grandmother. May God bless her soul with peace.

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It was with great sadness that we recently learned of the passing of Dr Rao Ivatury. The present manuscript was his last submission to the Journal, and a clear demonstration of his passion, dedication, and commitment to the PAJTCCES. Dr Rao Ivatury is sorely missed.

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