MEDICAL PHILATELY-34

Stamped into Sleep: The Story of Anesthesia

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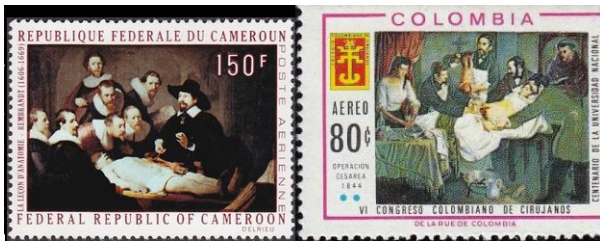
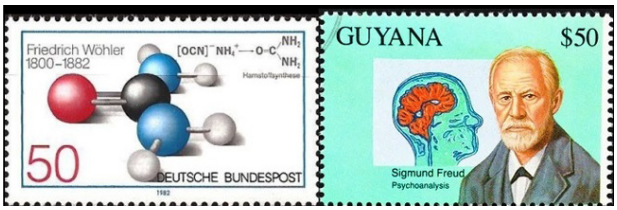
Pain is nature's early warning system, alerting us to harm and healing. Without pain, injury would go unnoticed and damage unchecked. The earliest echoes of pain relief are found in Ramayana, written by sage-poet Valmiki in 3 BC. Therein lies a timeless injunction: "Let the wounded be swiftly lifted from the battlefield, carried to shelter, their bleeding staunched and upon their wounds, let soothing oil be poured, enriched with the essence of healing herbs."



For the surgeon, pain was the formidable barrier he had to overcome before his fearful instrument could become a tool of healing. The Columbian stamp showing Enrique Grau's painting, *"First Cesarean Section,"* depicts the first successful C-section in Latin America, in 1844. There's no clear visual evidence of anesthesia being administered—no mask, no ether cone, and no assistant holding inhalation equipment.

Avicenna (Ibn Sina, 980–1037) the Persian polymath and physician, had a remarkably advanced understanding of pain for his time. His magnum opus, "The Canon of Medicine" described various types of pain in detail. Avicenna listed numerous analgesic herbs and preparations, many of which had sedative or anti-inflammatory properties: like Opium, Hyoscyamus, Mandrake and Willow bark.

Mandragora caulescens (Mandrake) It's roots contain the alkaloids hyoscine, scopalamine and anisodamine. Ancient physicians employed these extracts to render patients unconscious prior to limb amputations. Austria stamp issued to commemorate the 7th European Convention for Anesthesiology shows mandrake plant. Opium is the dried latex that oozes out from seed pods of the opium poppy **(Papaver somniferum)**. Opiates remain a very important and effective pain reliever and few drugs can match their analgesic effect. **Cocaine** is a powerful stimulant drug that originates from the leaves of the Erythroxylon coca plant, Cocaine was one of the first local anesthetics.



Friedrich Wohler (1800-1882) German chemist, who discovered Urea. Wöhler and Albert Niemann purified

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the active compound from the cocoa leaves and named it cocaine. They both observed its numbing effects. The German stamp commemorating Wohler shows the structure of Urea. **Sigmund Freud** the father of psychoanalysis studied cocaine and wrote about its stimulating and medicinal effects in the early 1880s. Freud's friend Carl Koller, an ophthalmologist experimented with it and discovered its effectiveness as a local anesthetic, revolutionizing eye surgery in 1884. Koller is regarded as the discoverer of local anesthesia.

Richard Willstater (1872 - 1942) German chemist and Nobel laurate. Willstätter earned his doctorate from the University of Munich in 1894 for his research on the structure of cocaine. His work paved the way for the commercial production of local anesthetics.

William Stewart Halsted (1852–1922), widely regarded as the father of American surgery, pioneered the concept of the "nerve block" in 1884 when he performed the first mandibular nerve block. He later advanced this technique further by developing the brachial plexus block. In 1932 Nobel laurate **Hans von Euler-Chelpin** isolated the alkaloid gramine from a mutant strain of barley. This eventually led to the development of lignocaine in 1943. Lignocaine remains the most versatile local anaesthetic drug in clinical practice.

Ropivacaine, a local anaesthetic was developed using principles of stereochemistry. It was **J. H. van't Hoff** who proposed the tetrahedral structure of carbon atoms, a basic concept in stereochemistry. For this work, van't Hoff received the first Nobel Prize in Chemistry in 1901. **Alexander Vishnevsky** (1874–1948), Russian surgeon, pioneered the transverse

injection anaesthesia technique known as the "squirt-and-cut" method, widely used during World War II. His work on Novocaine blocks and oil-balsam bandages significantly advanced therapeutic practices.

René Leriche, surgeon whose research on pain pathways, nerve blocks, and sympathectomy made significant contributions to anesthesiology. He introduced the stellate ganglion block. Nikolay Pirogov was the first to use ether in military surgery, and promoting its systematic, humane, and effective use, contributing to the development of both surgical and anesthetic practices.

In 1772, **Priestley** discovered nitrous oxide (N_2O). Priestley did not realize its anesthetic or euphoric properties. In 1799, Humphry Davy experimented with nitrous oxide. He inhaled it himself and found it caused euphoria, laughter, and temporary relief from pain. He called it "laughing gas" due to its effects.

William TG Morton was an American dentist who first publicly demonstrated the use of inhaled ether as an anaesthetic . India Post commemoration of 150

years of anesthesia depicts Dr WTG Morton administering ether at Massachusetts General Hospital 0n 16 Oct 1846. The surgeon John Warren is operating the neck of Glenn Abbot. William Morton is widely credited as the "father of anesthesia".

Crawford W. Long was the first surgeon to use ether as an anesthetic on March 30, 1842, marking the beginning of pain-free surgery. Only after reading Morton's claim of the first successful use of ether did Long publish his series, and he was eventually recognized as the true pioneer of surgical anesthesia. Republic of Palau stamp depicts Dr Crawford Long administering ether using a handkerchief in 1842.

James Young Simpson (1811-1870).The first physician to demonstrate the anaesthetic properties of chloroform and helped to popularize its use in medicine. 1992 Transkei stamp depicting Sir James Simpson administering chloroform for a delivery in the labour room. **Dr. Virginia Apgar** (1909–1974) anesthesiologist, is best known for developing the Apgar Score in 1952. She improved maternal and neonatal outcomes by emphasizing the importance of anesthesia in childbirth and newborn resuscitation.

Dr. Harold Griffith (1894–1985) Canadian anesthesiologist introduced curare, a muscle relaxant into anesthesia in 1942. This allowed for safer and controlled muscle relaxation during surgery. **Henry Boyle** developed the continuous flow anesthetic machines, with cylinders for oxygen, nitrous oxide and a bottle to vaporize diethyl ether. German stamp shows the Boyle's Anesthetic apparatus. The Boyle's apparatus has changed much and modern anesthesia workstations are more complex and precise.

Although many stamps depict scenes of surgery, only a few feature the anesthetist in action. Notably, the Jordan stamp on cardiac surgery and the GB Pant Hospital commemorative stamp from India include an anesthetist as part of the surgical team.

As anaesthesia continues to evolve with cutting-edge research and technology, it promises not only safer surgeries but also a broader role in critical care, pain management, and beyond.

END NOTE

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Conflict of Interest: None declared