injection of anesthetic drugs into the spinal canal. Dönitz and Klapp each studied the use of vasoconstrictors intradurally.

In 1905, Hugo Sellheim of Leipzig first used paravertebral blocks. Kappis, in 1911 used the posterior approach to produce splanchnic block and in 1919, Braun advocated the anterior approach. In 1909 Läwen perfected a technic of injecting branches of the sacral nerves through the posterior sacral foramina.

Dresser, in 1899, introduced hedonal. Ludwig Burkhardt reported his experimentation with intravenous ether and chloroform in 1909. He also experimented with other drugs for intravenous anesthesia. The first barbiturate, veronal, was synthesized in 1902 by Fischer and von Mering. Bogen-dörfer reported the intravenous use of dial in 1924. Other barbiturates were reported. Weese and Scharpf, in 1922, introduced evipan which was immediately successful as an intravenous anesthetic. "Twilight Sleep" was introduced in Germany by von Steinbühl in 1902. 57 references.

F. A. M.


Before the telegraph had revolutionized international communication the diffusion of knowledge was slow. It was not until February, 1847 that the first reports of the use of ether for surgical anesthesia were read to the members of the Swedish Medical Society. Doctor C. J. Ekström was asked by the Medical Society to make experiments with ether. His report was read in March. Doctor E. G. Polingren devised an apparatus to be used for ether administration. Doctors O. A. Swalin, V. Lundberg and others used ether within the first weeks after the reports of its use reached Sweden. Ether, and later, chloroform were used for obstetric practice soon after they were accepted for surgical anesthesia. 19 references.

F. A. M.


After hearing of Morton's demonstration of the anesthetic qualities of ether, Spanish physicians interested themselves promptly in the discovery. Diego de Argumosa y Obregon used ether for various surgical anesthesias beginning in February, 1847. Benavente, Ruiz Gimenez, and Ulpiano Fernandez inhaled ether vapor in their studies. Basilio San Martin was the first to observe and to point out the importance of antecedent alcoholism for the disturbances supervening during general anesthesia. Ether was used by Antonio Saez who administered a drachm of ether and an ounce of distilled water by enema before the patient was given inhalation ether. Vincente Guarnerio used chloroform eighteen days after Simpson published his discovery. In 1888, Professor Morales Perez began to use warm ether for anesthesia. He reported 4917 operations using this method, without having observed any respiratory complications. In 1886, Suarez de Mendoza used and recommended the use of a mixture of chloroform and oxygen, which he called the "Spanish method." 3 references.

F. A. M.


In March, 1847, Adolphe de Mareille de Vitry, junior, a dentist in Lisbon advertised that he would use ether in
dental operations but there is no evidence of such use. In a book published in October, 1847, he refers to the first use of ether for a surgical operation in Portugal. The operation was done in May. In April Bernardino Antonio Gomes and A. P. Barral experimented with ether on two volunteer students. A. J. Pinheiro, a surgeon, used ether when extracting a tooth. Cardosu Klerk, Joaquin Augusto da Silva, J. Teotonio, Francisco Alberto d’Oliveira, J. M. Alves Branco, Oliveira Velho and L. P. Fonseca were among the physicians who used ether soon after its discovery. Others who contributed to the study of ether were Manuel Maria, Sousa Soares, Casado Giraldes, L. de Castro Carreia, J. R. Nunez, F. Ferreira d’Abreu, J. M. Arnaut and Joao Felix Pereira. Many other physicians used ether and reported their experiences. Chloroform was tried by many surgeons. Amylne was used for anesthesia in 1852 by Casado Giraldes and later by other Portuguese physicians. Hypnotism was used by Portuguese surgeons for surgical anesthesia soon after it became known to them. Use of nitrous oxide was reported by Jearmel in 1869. 21 references.

F. A. M.


The first announcement of the discovery of ether reached Cuban physicians in an article in a daily newspaper on December 28, 1846. Vincente Antonio de Castro first used ether in surgical practice. During the year 1847 ether was used in almost all surgical operations in Cuba. Doctor Friu recommended a combination of morphine and ether. Doctor Nicolás J. Gutiérrez was the first to use chloroform. Cuban medicine was influenced by French example and chloroform continued to be preferred over ether from 1848 to 1916. 6 references.

F. A. M.


Testimony of doctors who graduated from the year 1888 on was used to study the history of anesthesia in Ecuador. In 1882 surgical patients were anesthetized with chloroform applied by compress. President Garcia Moreno, observing the backwardness of his country’s institutions, invited Gayraud and Domec from France to revise the medical teaching system. These French surgeons introduced chloroform. Ether was introduced by Dr. Francisco Martinez Aguirre about 1890. Local anesthesia was used a few years after 1888.

F. A. M.


“Man has always suffered pain. . . . The fervor with which we today celebrate the centenary of the discovery of the anesthetic properties of nitrous oxide is nothing more than that constant eagerness which moves us to alleviate suffering and to ascend from the abyss of pain to the summit of anesthesia. . . . No one knows pain so well as the doctor. . . . I have always asserted, almost too strongly, that the great advances and discoveries of Medicine are due principally to the contemplation of human pain. . . . We cannot forget that anesthesia, first, and antisepsis, and asepsis, later, were the two great developments which made possible the progress of surgery. . . . The discovery of the anesthetic properties of certain chemical substances was the product of chance and curiosity. . . .