from the bladder breaking the reflex arc and lessening tonus."

J. C. M. C.

STEIN, H. B.: *Anesthesia in Colorado during the Nineteenth Century.* Rocky Mountain M. J. **44**: 805–807 (Oct.) 1947.

"It is to be remembered that Colorado was a young state in the latter part of the nineteenth century, and there were few occurrences here which were of importance to the medical world. Publication in local medical journals did not exist until the 'Denver Medical Times' was founded in the mid 1880's. . . . The first discussion of anesthesia in the 'Denver Medical Times' was an article on cocaine published in Volume 4, January, 1885, by Dr. Tiffany of Kansas City. . . . In the same January issue of the 'Times' is an article by Thomas Hawkins who warned the profession not to be overly enthusiastic about cocaine although he had used it in several cases with satisfaction. . . . The next reports locally on cocaine came in 1887 when Dr. J. B. Mattison of Brooklyn, New York, published in the 'Denver Medical Times' detailed case reports concerning the toxic effects of cocaine. . . .

"The next written articles on a subject of interest to anesthesiologists were those concerning oxygen and its use in the treatment of various diseases. Dr. J. W. Collins read a paper at the 15th annual session of the Colorado State Medical Society in June, 1885, concerning oxygen. . . . Several more articles were published but none mentioned the usefulness of oxygen in anesthesia until Dr. P. D. Rothwell noted it in 1886. . . . In 1886, Dr. G. S. McMurtrie published an article on 'Anesthetics in Labor.' He had been using anesthetics for such during the preceding twenty-five years. He mentions the same prejudices as exist today, 1947. He advocated chloroform over chloral or ether. . . . In the same year, Dr. J. C. Davis, in his President's address at the 16th annual session of the Colorado State Medical Society, reviews the progress of surgery during the preceding forty years. He gives great credit to the use of anesthetics for that remarkable progress. . . . In 1892, Dr. J. W. Powers reported to the State Medical Society meeting the death of a woman from chloroform which was administered in a dentist's office in Idaho Springs for the extraction of teeth. . . . The first comprehensive article published on anesthesia in the 'Denver Medical Times' was that by Dr. E. Curtis Hill who gained his experience while assisting Dr. Thomas Hawkins. He mentions only ether and chloroform, dismissing the other agents as inadequate. . . .

"The late Dr. Miel in June, 1893, published an article, 'Avoidable Delays Attending Operations.' In this he stressed several things with which we are familiar fifty years later. He describes the anesthetist of that time in this way: 'He arrives late with everyone waiting and produces cumbersome equipment. He starts the anesthetic, pushing the ether until the patient starts coughing; then he pushes more ether until it is necessary to use artificial respiration. And then the patient vomits. Finally all is going well again and the operation begins. The anesthetist becomes so engrossed in the operation that the patient shows signs of asphyxiation requiring resuscitation again, and finally the anesthetist finds he had no battery at hand, or having one on hand, it is not in order, so no faradic stimulation can be given.'

"The first concrete evidence of interest in anesthesia as such came on June 21, 1893, when there was a symposium on anesthesia before the Colorado State Medical Society. Doctor J. N. Hall acted as chairman. . . . In 1896, Dr. Charles Elder in a paper

given before the Medical Society told that oxygenized chloroform held no advantage over the administering of the chloroform on a mask. . . . The following year, Dr. Kate Lobinger told of the use of chloroform in labor. She devoted a great part of her paper to extolling the virtues of Sir James Simpson. In 1898 came the first local paper on 'Infiltration Anesthesia,' written by Dr. W. E. Harwood. . . . In 1897 Dr. Saling Simon read before the Colorado State Medical Society, a paper on 'The Relationship of the Operation to the Anesthetist.' This appeared in the 'Medical Record.'"

J. C. M. C.

SULKIN, S. E., AND ZARAFONETIS, CHRISTINE: *Influence of Anesthesia on Experimental Neurotropic Virus Infections. II. In Vitro Studies with the Viruses of Western and Eastern Equine Encephalomyelitis, St. Louis Encephalitis, Poliomyelitis (Lansing), and Rabies.* J. Exper. Med. **85**: 559–569 (June 1) 1947.

"Experimental neurotropic virus infections previously shown to be altered by ether anesthesia are caused by viruses destroyed in vitro by anesthetic ether; this group includes the viruses of Eastern equine encephalomyelitis, Western equine encephalomyelitis, and St. Louis encephalitis. Experimental neurotropic virus infections which were not altered by ether anesthesia are caused by viruses which are refractory to the in vitro virucidal activity of even large amounts of anesthetic ether; this group includes the viruses of poliomyelitis (Lansing) and rabies. Quantitative studies of the in vitro virucidal activity of ether indicate that concentrations of this anesthetic within the range found in central nervous system tissues of anesthetized animals possess no virucidal activity. The lowest concentration of ether possessing significant virucidal capacity is more than 15 times the maximum concentration of the anesthetic tolerated by the experimental animal.

"Concentrations of ether 50 to 100 times the maximum amount tolerated by the anesthetized animal are capable of destroying large amounts of susceptible viruses, the average lethal dose (LD_{50}) being reduced more than 5 leg units. On the basis of the studies presented in this report, it cannot be concluded that direct virucidal activity of ether is not the underlying mechanism of the inhibition by anesthesia of certain experimental neurotropic virus infections. Indirect inhibition of the virus by the anesthetic through an alteration in the metabolism of either the host cell or the host animal as a whole appears at this point to be a more likely possibility." 23 references.

J. C. M. C.

VAN DER POST, C. W. H.: *First Experiences with Intraval Sodium.* S. A. Med. J. **21**: 526–527 (July 26) 1947.

"Messrs. May and Baker, Ltd., manufacturers of cyclonal sodium, have added to the advances in anaesthetics by marketing intraval sodium, also known as thiopentone soluble. Intraval sodium is a mixture of 100 parts by weight of sodium ethyl 1-butyl thiobarbiturate and 6 parts by weight of exsiccated sodium carbonate. . . . Intraval sodium is a potent anaesthetic producing narcosis of the same depth as pentothal sodium, and from practical experience it would appear to be less irritating to the tissues and somewhat shorter acting in the single-dose technic. No doubt the alkalinity of the solution accounts for this, and it is likely that intraval sodium will be less apt to thrombose a vein and to produce a chemical lymphangitis or ulceration of the surrounding tissues. The author has used intraval sodium