derivatives or by its original German number 10820. . . In rats, dogs, and man, it possesses marked analgesic action, being at least equal to morphine and several times more potent than demerol. In many respects this substance is closely similar to morphine. However, qualitative differences between the effects of morphine and this butanone derivative have been noted. Apparently, there is little or no tolerance development to the analgesic action of 10820 in dogs. Side-reactions in human beings do not appear to be excessive. Clinical results so far substantiate the laboratory data." 14 references.

J. C. M. C.


"The mechanism of the depressant action of barbiturates on the central nervous system is not clearly understood. However, evidence is accumulating to suggest some relationship between the action of this group of drugs and altered carbohydrate metabolism. . . . The present study has been made in an attempt to determine whether pyruvic acid plays some role in the anesthetic effect of pentobarbital on rabbits. . . . Data on 64 rabbits anesthetized with pentobarbital sodium (40 mgm./kgm. intravenously) indicate that: 1. Epinephrine increases the blood sugar level and shortens the sleeping time. 2. Insulin decreases the blood sugar level and shortens the sleeping time. 3. Intravenous injection of pyruvic acid decreases the depth of depression, and shortens the sleeping time. . . . "but does not alter materially total depression time in rabbits." 21 references.

J. C. M. C.


"Following an observation that pelvic examinations upon disturbed female psychiatric patients were easily made because of complete relaxation, it was thought that curare would expedite complete muscular relaxation under general anesthesia. Griffith, of the Department of Anesthesia, Homeopathic Hospital of Montreal, was the first anesthetist to administer Intocostrin under general anesthesia to provide complete abdominal muscular relaxation associated with quiet breathing and contracted intestine. From his experience he ventures to predict that curare will increase the use of pure cyclopropane or pentothal anesthesia without ether for abdominal surgery and thus reduce postoperative complications, and that it will reduce the use of spinal anesthesia with its attendant hazards. The complete absence of postoperative effects from curare has been one of the most striking and encouraging features of his investigation. Cullen, of the State University of Iowa College of Medicine, who has used Intocostrin routinely in abdominal surgery since 1942 in more than one thousand cases; Cole, of the University of Minnesota Hospital; Smith, of the Latter Day Saints Hospital, Salt Lake City; and a number of other investigators have published similar favorable reports and contributed substantially to the introduction of curare into the field of anesthesia. The Mayo Clinic has recently stated that curare is being used more and more and its use has been so satisfactory, particularly with cyclopropane, as to warrant extended and continued use. Mallinson, of England, states 'in curare we have an agent capable of producing relaxation comparable with spinal methods in the presence of light anesthesia, an ideal
hitherto quite unattainable." Recently Burhaus and coworkers found in two patients while using Intocostrin for surgical relaxation that hiccoughs simultaneously disappeared. They then used Intocostrin successfully with about 30 cases of postoperative hiccoughs. . . . Johnston discovered while using Intocostrin as a diagnostic method in suspected myasthenia gravis that severe menstrual pain was relieved. She gave 73 intravenous injections of 50–100 units in 49 cases of dysmenorrhea, believed to be of primary type. In some cases a second dose of 50 units was given several hours after the initial dose. Within 2 to 15 minutes such disabilities as cramps, nausea, backache, dizziness were relieved. Since curare has proved to be the most complete, perfect muscular relaxant known, it will overcome any muscular spasm or disorder. One drawback has been its transient action. It should be possible to give the drug in a vehicle causing delayed muscular absorption and thus perfect a sustained action. . . . Another possible use is to reduce difficult overriding fractures, such as fractured femurs, vertebral fractures or possibly herniated intervertebral discs, in which the use of curare should be extremely helpful to overcome muscular spasm and allow perfect reduction under the fluoroscope. In difficult obstetrical cases a physiologic dose of curare should completely relax the pelvic muscles and prevent delivery tears, and in this way obviate the necessity of an episiotomy operation." 29 references.

J. C. M. C.


"The marked reduction of the chemotherapeutic effect of sulfonamides by the presence of pus and cell detritus has been explained by their content of p-amino-benzoic acid (PABA). This substance supposedly competes with the sulfonamides for the same receptors in the metabolic processes of the bacteria, due to the chemical similarity of the structures of PABA and the sulfonamides; or interferes on the basis of this similarity with certain catalytic processes. It was soon discovered that other drugs containing the PABA structure also inhibit the therapeutic action of sulfonamides. The most important examples are local anesthetics which are derived from PABA, particularly procaine and its congeners. There is good experimental evidence that procaine, being an ester of PABA with diethylaminoethanol, is easily split in the body into these components. This is probably the first step in the metabolic disintegration of this compound. In a study of the mechanism of the convulsive action of local anesthetics, it seemed possible that the presence of large amounts of PABA in the body might perhaps antagonize these central effects of procaine in a similar manner as in the case of PABA and sulfonamides in bacteria. . . . We found the guinea pig a very suitable animal for the study of procaine-induced convulsions. . . . The assumption of the presence of a competitive inhibition due to structural similarity of the convulsive agent and the inhibitor seems most plausible from the experimental evidence . . . It has been shown that the incidence of convulsions which follow intramuscular injection of procaine in guinea pigs can be substantially reduced by preceding administration of either of the split products of procaine; namely, paraaminobenzoic acid (PABA) or diethylaminoethanol (DEAE). A mixture of the two components is even more effective in this respect. Certain derivatives of both PABA and DEAE possess qualitative similar action, the degree