

In complications of pregnancy, labor, and delivery involving the cord and placenta, analgesics and anesthetics may be particularly harmful, for the very nature of such complications is bound to cause varying degrees of anoxemia in the baby. . . . In the delivery of prematures, great care should be used in the selection of analgesics and anesthetics, both as to kind and as to dosage. Those that depress the respiratory effort or interfere with oxygen supply should be avoided. Such drugs are often the deciding factors in survival. It appears as though caudal analgesia offers much in the delivery of premature infants."

J. C. M. C.

LYFORD, JOHN III: *The Choice of the Anesthetic Agent and the Care of the Patient in Relation to the Anaesthesia in Orthopaedic Surgery*. J. Bone & Joint Surg. 25: 659-662 (July) 1943.

"The anaesthetics used in orthopaedic surgery include the inhalation, local, spinal, rectal, and intravenous agents. . . . Local and spinal anaesthetics have a restricted use in orthopaedic surgery because they permit operative procedures only in limited regions. . . . Pentothal sodium is advocated for patients with head injuries on whom orthopaedic procedures must be performed, because it is associated with little nausea or vomiting, and has little effect on the blood pressure and intracranial pressure. It is valuable, also, for anaesthetization of patients with epilepsy, since it is a barbiturate. On the Orthopaedic Service at The Johns Hopkins Hospital, pentothal-sodium intravenous anaesthesia has been found effective for most orthopaedic procedures. . . . A recent study revealed no deaths due to the anaesthetic agent among patients undergoing orthopaedic procedures in The

Johns Hopkins Hospital during the last ten years. . . . Elective orthopaedic procedures requiring anaesthesia should be postponed until any existing infection of the respiratory tract has been cleared up. . . . In general, orthopaedic patients in the 'poor-risk' group and those in shock do not react so well to major operative procedures performed under local or spinal anaesthesia as under general anaesthesia. Especially in patients undergoing emergency orthopaedic procedures is it important to consider the details of preanaesthetic medication, the choice of the anaesthetic, and the judicious use of intravenous fluids. In orthopaedic surgery, because the anaesthetic agents which may be used alone or in various combinations make available anaesthesia suitable for almost any procedure on any patient, both the operative procedure and the patient's course can be made easier and more uneventful by the constant recognition of the essential part that the anaesthesia plays in the whole picture of an operation, and by close cooperation between the orthopaedic surgeon and the anaesthetist."

J. C. M. C.

MCMASTER, P. E.: *Treatment of Ankle Sprain: Observations in More than Five Hundred Cases*. J. A. M. A. 122: 659-660 (July 3) 1943.

"Ankle sprains may cause much disability, and often do, in military, industrial and other activities. Observations on various types of treatment in over 500 cases closely studied are presented. More than 200 of the patients were treated with injection of procaine hydrochloride solution and over 200 were strapped with adhesive tape. Sixty-eight received either no treatment or cold and hot packs or an elastic bandage for support. The patients treated were men in active military

service mostly in the late teens and twenties, although some were in the fourth, fifth, and sixth decades. . . . The technic of local injection has been described by Leriche and others. Fracture is excluded by radiographic study. The sprained ligaments indicated by tender points are determined by palpation. An antiseptic is then applied to the skin. Two per cent procaine hydrochloride solution without epinephrine is used routinely and with it a wheal is made in the skin over the site of injury with a fine needle. The latter is replaced by a larger needle and the underlying injured ligament is injected. All tender points, whether proximal, distal or intervening portions of the ligament, are injected. A search is then made for tender areas in other ligaments and these are each carefully injected until no tender or painful areas remain either with palpation or ankle and foot motion. The amount of procaine solution varies from around 10 to 20 cc. There is no hesitancy to use an ounce or more if necessary. Next an elastic bandage is wrapped snugly around the ankle, and the patient is requested to walk around the room. If any pain is experienced, further injection is done. The patient is then returned to activity with instruction to use and move the foot and ankle normally, except for running and jumping. Also it is stressed that while sitting as at a desk or table, the foot should be moved and not kept immobile in one position even for short periods. The elastic bandage is to be removed and rewrapped by the patient in one to two hours to prevent possible circulatory constriction. Daily and periodic return for check-up is required in all cases. . . .

"Irrespective of the type of treatment, patients who returned immediately to normal activity and used and moved the foot and ankle improved much more rapidly than those who did

not. Injection with 2 per cent procaine hydrochloride solution into the injured ligaments followed by normal activity gave uniformly the best results. These patients, following complete elimination of pain and tenderness by injection continued immediate use of the part, avoiding only especially strenuous activity as hard running or jumping." 7 references.

J. C. M. C.

BARBOUR, J. H., AND SEEVERS, M. H.: *Narcosis Induced by Carbon Dioxide at Low Environmental Temperatures*. J. Pharmacol. & Exper. Therap. 78: 296-303 (July) 1943.

"The total oxygen consumption of the albino rat is reduced significantly when this animal is placed suddenly in an atmosphere containing 10% CO<sub>2</sub>. It is difficult to determine by observation alone whether or not a parallel decrease in the total body activity of the animal occurs since the hyperpnea is so marked as to obscure any manifestations of depression. In normal man, unconsciousness usually occurs at this level of CO<sub>2</sub> in spite of the dyspnea, indicating that some structures within the nervous system are depressed. Since it is of some theoretical, as well as practical interest to know whether or not this and lesser concentrations of carbon dioxide exert a depressant action, the following experiments have been undertaken. They have been based on the fact that even minor grades of depression reduce the capacity of an animal to adjust itself to a cold environment. The results obtained, even with the lower concentrations of CO<sub>2</sub>, were so striking that parallel experiments have been made with other agents in order to determine, if possible, the relation of the phenomenon to total oxidative metabolism. . . . A reversible state of narcosis having certain characteristics of both hibernation and anesthesia may