the pulse became barely perceptible. An intravenous injection of 6 c.cm. of nikethamide was now given without apparent effect. Five minutes after the appearance of the first alarming signs, the pulse was quite inperceptible and no heart sounds were audible to auscultation. Pallor without cyanosis persisted and the pupils were now dilated. At this stage 1 c.cm. of 1:1,000 adrenaline was injected by the surgeon through the fourth left intercostal space, as near to the border of the sternum as possible. This produced no apparent effect except for a few generalized muscular twitchings. After an interval of one minute, a similar injection was given through the third left intercostal space, which, preceded by a few powerful generalized muscular contractions, was followed at once by reappearance of the radial pulse and heart sounds to auscultation (7 minutes after the first appearance of untoward signs). The pulse was irregular but quite strong and was accompanied by the appearance of a pink colour in the patient's face. Spontaneous respiration restarted at the same time, until which time effective artificial respiration had been continued without interruption. The operation was then resumed and completed in a further 40 minutes, during which time pure oxygen was administered continuously. . . .

"He developed a dry gangrene of the leg which had been the site of the compound fracture. This leg was amputated above the knee 24 days after the first operation. On this occasion a unilateral subarachnoid leg-block was employed, accomplished by 110 mg. of a 10% solution of procaine, with a premedication of morphine, gr. ⅙, and hyoscine gr. $\frac{1}{150}$, 1½ hours before operation. There was no appreciable fall of blood-pressure and the patient remained in an excellent condition throughout and after the operation. Dissection of the amputated leg revealed a thrombosis of the posterior tibial artery in its entire length. On questioning, the patient gave a history of having 'collapsed' under a previous anaesthetic, but he could give no particulars."

J. C. M. C.

TYSON, R. M.: *Effects of Analgesia and Anesthesia on Prematures.* Pennsylvania M. J. 46: 1051–1053 (July) 1943.

"It can be safely stated that the greatest hazard to prematures is prematurity itself. Outside of this, it has been demonstrated that anoxemia is the primary problem with premature babies, although hard to prove pathologically. . . . One of the physiologic effects of morphine sulfate administered during labor is retardation of the mother's respiratory rate, and the same reaction has been noticed to occur in the infant, particularly if the drug is given less than four hours before birth. . . . The same reaction is reported for pentobarbital, paraldehyde, and chloral hydrate, as well as for anesthetics of the volatile type such as ether and nitrous oxide, unless oxygen makes up at least 30 per cent of the mixture. Cyclopropane appears to be able to produce full surgical anesthesia of the mother without interrupting fetal respirations and, at the same time, permits of a large proportion of oxygen (70 per cent) administration. . . . At the Philadelphia Lying-In-Hospital, over an eleven-year period, 22,526 full-term babies were delivered with a mortality of 1.9 per cent and 2,142 premature infants with a mortality of 37.8 per cent. In the latter group, it was observed that birth weight was the deciding factor in survival. . . . Our conclusion has been that morphine used as an analgesic during labor is a dangerous procedure from the standpoint of survival of the premature infant."

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 Anaesthetic 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