EDITORIAL: *Local Anesthesia Treatment of Sprains.* New York State J. Med. p. 2383 (Dec. 15) 1943.

"Sprains increase absenteeism or serve to retard productive capacities . . . in the military sphere. . . . The problem was of sufficient magnitude to warrant study, and a solution has been reported and verified.

"Comparison . . . led to . . . the injection of procaine hydrochloride into the involved areas. Ten to 20 cc. of a 2 per cent solution were generally injected into the injured ligaments. All tender points and the adjacent areas were anesthetized. Injections were continued until motion disclosed the absence of all pain. Preliminary x-ray studies were made to exclude fractures or injuries other than ligamentous ones. . . . Instead of immobilization, normal use of the joint hastened recovery. Undue mobility . . . should be avoided. . . . It appeared that use of the injured ligaments accelerated the absorption of extravasated blood or fluid transudates. . . .

". . . Treatment of sprains by infiltration . . . with a local anesthetic is not a new discovery but rather is a rediscovery. . . . Success depends upon two factors: the elimination of pain and tenderness and the normally active use of the sprained joint. . . . This . . . permits the resumption of normal activity without loss to the individual, to the organization . . . or to industry."

P. M. W.

GILLESPIE, N. A.: *Death During Anaesthesia.* Brit. J. Anaesth. 19: 1–16 (Jan.) 1944.

Too often the anesthetic agent has been blamed for the occurrence of death during anesthesia, while the condition of the patient and the wisdom with which he has been treated have been overlooked. A plea for the frank statement and evaluation of the facts is made. Logical and strict definitions of "mortality" are suggested. The author outlines the attitude which surgeon and anesthetist should have toward moribund patients, an attitude which, unfortunately, does not seem to be common in this country. The point is made that to ascertain the statistical frequency of death during anesthesia one must consider large numbers of cases of all types, including those in which operation had been attempted in any case in which it held out the only hope of recovery.

An attempt is made to determine the incidence of deaths during operation by tabulating the results of five teaching hospitals in three different countries. This figure is fairly constant, the average being 0.12 per cent in 227,546 cases. The best figure was .089 per cent for some 61,000 cases and the worst .198 per cent in some 25,000 cases.

The author then reports in detail his personal experience of seven such cases in 13,000 administrations. The causes of death are discussed, and he speculates as to whether or not death could have been avoided.

A. I.

ELAM, JOHN: *The Need for an Accurate Understanding of Anaesthetic Risks.* Brit. J. Anaesth. 19: 32–47 (Jan.) 1944.

In this article Dr. Elam points out that though we are all aware of the occurrence of anesthetic accidents, the reporting and analyzing of such events have been entirely inadequate, so that worth-while assessment of anesthetic risks and deaths has not been possible. Older methods and agents, notably chloroform, have been abandoned. He questions whether this change has been justified. Studies of deaths and accidents with various agents are quoted from the literature. No conclusions can, however, be drawn except that the

administration of anesthetics is attended by greater risks when entrusted to persons of little experience.

Spinal, intravenous, local, nitrous oxide, cyclopropane, and ether anesthesia are shown to be attended by both death and complications, as reports from various sources have demonstrated. Not one of the aforementioned agents can be called safe. Vinesthene and trichlorethylene have not as yet had enough extensive use to be considered. In a reminiscent, non-statistical manner the author cites his own sad experiences.

The paper is concluded by a selection from "Practical Anaesthesia" by the anesthetic staff of the Alfred Hospital, Melbourne, Australia, in which twelve considerations are proposed as criteria for the comparison of anesthetic risks. Most germane to the subject is the last.

"Should a fatality occur, it should be discussed with entire frankness by the anaesthetist and all parties concerned, so that all possible errors of judgment and technique may be detected and avoided."

M. H. H.

AYRE, PHILIP: *Anaesthesia for Neurosurgery (With Special Reference to Tricholorethylene).* Brit. J. Anaesth. **19**: 17–31 (Jan.) 1944.

In this paper, the author discusses the problem of anesthesia in neurosurgery, emphasizing the necessity of providing the neurosurgeon with an operative field in which there is neither vascular congestion, nor venous oozing which may be attributed to the anesthetic or method of administration. He contends that the methods generally employed, to wit, basal narcosis supplemented with nitrous oxide in a semi-closed system, do not achieve this ideal. In consequence he has utilized the device of the "open" T-tube-piece, described in *Lancet,* March 6, 1937, p. 561. Administration by this method of all agents has been conspicuously successful, particularly with neurosurgical procedures. Since July 1942, trichlorethylene rather than chloroform has been used to supplement nitrous oxide. Since then 105 neurosurgical patients have been anesthetized with trichlorethylene. Seven of these patients developed cardiac irregularities. Of these, five were dismissed as of no consequence; two bad-risk patients developed more serious arrhythmias. One, a 2:1 block which disappeared when trichlorethylene was discontinued; the other a total irregularity, did not cease even when ether was substituted, but finally stopped during the latter part of the operation, during which time trichlorethylene was cautiously added. Electrocardiograms were not taken. As has been observed before, an increase in respiratory rate was noticed with trichlorethylene anesthesia. No complications could be associated with this increase. Postoperative pulmonary complications were relatively rare (two cases). Nausea and vomiting were minimal. The majority of the patients were "fully conscious within an hour from the time the operation ended."

The technic for preparing patients is described. Opiates are used for premedication, and the throat and vocal cords sprayed with 2 per cent pontocain. Induction is carried out either with 4–10 cc. of 5 per cent sodium pentothal or with nitrous oxide-trichlorethylene in a semi-closed system, after which the patient is intubated orally, and the mouth packed with gauze wrung out in liquid petrolatum. The T-piece is then connected and constant flows of gas begun.

Four cases with accompanying anesthetic charts are presented illustrating the course of anesthesia for intracranial operations.

Stress is laid upon the fact that the