NERVE DESTRUCTION FOLLOWING EXTRAVASCULAR INJECTION OF PENTOTHAL SODIUM

This case is reported to illustrate the effect of pentothal sodium when injected subcutaneously. The concentration of the solution used is not known.

A male adult received pentothal sodium intravenously in January 1944. The patient stated that almost a syringe-full of the anesthetic solution was injected subcutaneously. Subsequently, the entire area of the elbow became inflamed and swollen. Treatment was required for two months before this reaction subsided. According to the patient, treatment included wet packs and whirlpool baths. Necrosis of the skin did not develop, and there was no cutaneous scar.

The findings reported at this time were noted approximately ten months after the injection. The area of existing anesthesia is innervated by the following nerves: the lateral antibrachial cutaneous branch of the musculocutaneous; the dorsal antibrachial cutaneous branch of the radial nerve (external cutaneous of the musculospiral nerve), and the superficial branch of the radial nerve. Each of these nerves passes through the antebrachial fossa, and would be bathed in a solution injected into the antebrachial fossa. Pain sensitivity was tested by pin prick; touch by a wisp of cotton; cold by a piece of ice, and heat by a warm glass. All of these senses were completely absent in the center of the involved skin area. Toward the periphery of the denervated area there was a gradual increase in appreciation of these stimuli.

Deep pain sensation was also tested. Forceful pinching of the muscles through the anesthetic skin was painless; deep pressure on the metacarpal bone underlying the anesthetized skin was painless, and compression of the web between the index and second finger elicted very slight tenderness. When these same tests for deep pain were carried out on the opposite arm, definite and prompt painful response resulted. In this instance deep pain sense was lost in the same region as cutaneous pain.

Motor paralysis was not noted; however, the patient’s grip was much weaker in the affected arm. The pilomotor apparatus was not functioning. Cutis anserina (goose flesh) could be induced over the body and other arm, but not in the affected area. Apparently some scar tissue had formed in the subcutaneous tissue of the elbow. The patient experienced a stretching sensation when the elbow was fully extended. Some tenderness of the tendon of the biceps brachii still persists.

CAPT. SAMUEL L. LIEBERMAN,
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THE VIEWS OF ANESTHESIOLOGY

March 18, 1946

Dr. P. R. Minahan
Green Bay, Wisconsin

Dear Doctor Minahan: After reading your “President’s Page” certain thoughts came to mind. Would it be well for the State Society to insist on certain rights of the profession?

I have put some thoughts on the enclosed pages, related to the matter of anesthesia. Would it not be a good follow up to your expressed thoughts to—Pass a resolution in the House of Delegates: (1) condemning dominance and dictation of the practice of anesthesia by hospital management, or (2) condemning the exploitation of anesthesia through charging more for service than is spent for that purpose, or (3) recommending that the staff of each hospital be allowed to determine how the service of anesthesia shall be accomplished.

Perhaps it is not my concern but the specific example of what you imply in your “page” is so glaring regarding anesthesia in our state that it seems worth considering as a beginning in fighting abuses.

Sincerely,

(Signed) RALPH WATERS, M.D.,
Department of Anesthesia,
University of Wisconsin
Medical School