CURRENT COMMENT AND CASE REPORTS

CURRENT COMMENT is a section in Anesthesiology in which will appear invited and unsolicited professional and scientific correspondence, abbreviated reports of interesting cases, material of interest to anesthesiologists reprinted from varied sources, brief descriptions of apparatus and appliances, technical suggestions, and short citations of experiences with drugs and methods in anesthesiology. Contributions are urgently solicited. Editorial discretion is reserved in selecting and preparing those published. The author's name or initials will appear with all items included.

ASEPTIC MENINGITIS FOLLOWING LUMBAR EPIDURAL BLOCK: CASE REPORT

The occurrence of meningitis following epidural block is mentioned by Moore in his book “Regional Block,” but its incidence was not made clear. The following is a report of a case which occurred recently under what was apparently a normal lumbar epidural block.

A 26 year old Caucasian male was referred to the Anesthesiology Service for one or more sympathetic blocks, the reason for which was a residual thrombophlebitic syndrome manifested by pain and swelling of the left lower extremity. The patient's original injury had been a fracture of the left femur and of the left metatarsals, both of which had healed but during the course of which the patient had contracted a thrombophlebitis of the left lower extremity. This had responded to the usual therapeutic measures with the exception of the complaints mentioned above. These complaints had persisted despite an active program of physical therapy which the patient had received.

Prior to the block, the patient was given an intramuscular dose of 25 mg. of ephedrine. He then was given a lumbar epidural sympathetic block, a 20 gauge blunt spinal needle being inserted at the second lumbar interspace, and a total of 7 cc. of 0.8 per cent xylcocaine® with 1 to 200,000 epinephrine added was injected. The position of the needle was checked carefully 2 times before injection was made, once during the course of injection and again immediately following. At no time was there any indication that the dura had been punctured. Following the injection, the patient elicited all the signs expected of an epidural sympathetic block. These included objective warming of the lower extremities, distention of the superficial veins of both extremities, and, in addition, relief of the pain which previously had been present. The patient also experienced a feeling of subjective warmth. After a period of twenty minutes of observation, he was returned to his ward in good condition. The onset of signs and symptoms of the block as mentioned above gave no indication that a subarachnoid injection had been made.

Two hours later, the patient was seen by the anesthesiologist on the ward and he was still free of complaints. There had been some motor loss due to the block but what little loss had been experienced in the left upper thigh had begun to return to normal function. The patient showed no untoward effects from the block at this time.

Four hours following the block, the patient experienced a chill and onset of a slight headache. His temperature at this time was 99.4 F. Eight hours following the block, the patient had a severe headache and stiffness of the neck. His temperature was 101 F., his pulse was 100 and blood pressure 155/100. He was seen by the Medical Officer of the Day at this time and a diagnosis of meningitis was made. A spinal tap was done, cloudy fluid was obtained and the cell count was 9,600 cells (polymorphonuclears). The patient was transferred to the isolation ward.

Initial impression upon arrival on the isolation ward was that of an acute infectious meningitis. However, smears of the spinal fluid taken showed no organ-
isms. Penicillin and streptomycin therapy was begun immediately.

At 4 o'clock the day following the block (24 hours later), the patient was feeling much better. He still had some headache, but it was milder than it had been at the onset of his illness. Therapy for his meningitis was continued.

On the second day following the block and 36 hours after the onset of his symptoms, a spinal-fluid examination showed a normal sugar and protein content, with 1,200 cells (60 per cent polymorphonuclears). Two days later, the patient no longer had any headache and there was no residual neck stiffness. He apparently was in good condition and was transferred back to the Orthopedic Service. A spinal-fluid examination made the day that the patient was transferred back to the Orthopedic Service showed 52 cells with 50 per cent lymphocytes and 2 polymorphonuclear cells. Cultures taken from the spinal-fluid specimen during the course of his illness showed no growth. Final impression of the Officer in Charge of the Isolation Section was that of meningitis secondary to chemical irritation.

The patient was seen again by the anesthesiologist when he returned to the Orthopedic Service. He was entirely free of symptoms or sequelae relative to his episode of meningitis. The complaints referable to his left leg, that is, swelling and pain no longer were experienced by the patient. He continued symptom-free from the time of his epidural block and was discharged.

In retrospect, cultures of the 2 per cent xylocaine solution and normal saline solution which had been used were both reported negative by the laboratory upon culture. The spinal set used as the block set was one which had been run in the usual manner with dial control for sterilization. There was no deviation from standard procedure or any indication that sterile technique had been broken. Therefore this case must be accepted as an aseptic meningitis, probably due to chemical irritation from the solution used, with the portal of entry into the subarachnoid space undetermined.

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A SPECIAL PAD FOR PATIENTS IN THE PRONE POSITION

One of the problems of the anesthesiologist is that of maintaining adequate respiratory exchange in patients operated on in the prone position, as in orthopedic and neurosurgical procedures. The use of sandbags at the shoulders and the hips, rolled blankets, and specially built well-padded metal supports have all been employed, but all have disadvantages. With sandbags, the abdomen of an obese or a flexible patient may often be in contact with the operating table; the resultant increase in intra-abdominal pressure will impede the downward movement of the diaphragm in respiration, and increase in venous pressure and wound oozing may result from pressure on the inferior vena cava. Rolled blankets are difficult to maintain in the right position without collapsing. The metal support provides excellent operating conditions, but the center is high above the operating table and some difficulty is found in placing an unconscious patient upon the support.

By the use of specially shaped firm but compressible foam rubber pads, many of these difficulties have been relieved. Figure 1 indicates the shape and a description of the dimensions follows.

The dimensions are: a uniform thickness of 5 inches, width of each of the paired pads 6 inches at each end, narrowing to 3 inches in the middle, and a total length of 18 inches. The thickness has been found adequate even in the obese patient to relieve pressure on the abdomen when in proper position and the kidney shape allows lateral abdominal expansion as well. The ends of the pads which lie under the shoulders are attached by straps with buckles, and thus can be spread to vary with the width of