

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.

PARAPLEGIA FOLLOWING INHALATION ANESTHESIA FOR SUBTOTAL GASTRECTOMY: A CASE REPORT *

Nicholson and Eversole (1) have recently discussed direct trauma, inflammatory reaction, toxicity of the drug, and pre-existing neurologic affections as possible etiologic factors in neurologic complications following spinal anesthesia. The exact cause, however, is often difficult to determine. The complications most frequently reported following spinal anesthesia are headache, septic and aseptic meningitis, arachnoiditis, neuritis, myelitis, and cauda equina syndrome.

Woltman (2) listed senility, arteriosclerosis, infectious neuritis and trauma as important factors in the etiology of these neuropathies. He found that convulsions, extrapyramidal rigidity and post-operative psychosis followed general anesthesia almost exclusively, while cranial nerve palsies, hemiplegia, and peripheral neuropathies followed general as well as spinal anesthesia.

The following illustration of paraplegia following general anesthesia is reported because of its rarity. Had spinal anesthesia been used, such anesthesia would have been incriminated.

A man, aged 52 years, was admitted April 11, 1947, with symptoms of recurrent duodenal ulcer since 1922. An appendectomy had been performed in 1929,

and a perforated gallbladder had been removed in 1936. Both were done with ether anesthesia. Upon admission there was persistent epigastric pain, hematemesis, and loss of appetite. The erythrocyte count was 2,950,000, and hemoglobin was 7.2 Gm. The blood pressure on April 24, 1947, was 200 mm. of mercury systolic and 110 mm. diastolic. The patient had been receiving morphine since 1945 for pain.

On May 16, 1947, he underwent a subtotal gastrectomy. Premedication consisted of morphine, 10 mg., and scopolamine, 0.4 mg., one and one half hours before induction. The preoperative blood pressure was 160 mm. systolic and 90 mm. diastolic, the pulse rate was 82 per minute, respirations were 18 per minute. Cyclopropane was used for induction followed by ether for maintenance through a cuffed endotracheal tube using a to-and-fro closed, carbon dioxide absorption, metric machine. During anesthesia the blood pressure varied, the highest being 200 mm. systolic and 110 mm. diastolic and the lowest 100 mm. systolic and 70 mm. diastolic. Alterations in blood pressure accompanied traction on the stomach and were apparently caused by celiac plexus reflex. At the end of the surgical procedure the blood pressure was 174 mm. systolic and 104 mm. diastolic, the pulse rate was 122 per minute, and respirations were 30 per minute. During operation he was given 1,500 cc. of blood and 1,000 cc. of 5 per cent glucose in physiologic

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saline solution intravenously. The procedure lasted five hours and fifteen minutes.

On the first postoperative day the patient was out of bed for a short period. On the second postoperative day he complained of stiff, crampy pain in the back of the neck, low back pain, and pains in the buttocks. He had a feeling of numbness in both lower extremities and he was unable to raise his legs. The temperature was 98.6 F., the pulse rate 60 per minute, and the blood pressure 200 mm. systolic and 110 mm. diastolic. Lumbar tap was done and only a small amount of blood could be aspirated. On the following day, cisternal puncture was performed and bloody cerebrospinal fluid was obtained. He had an atonic, neurogenic cord bladder and paraparesis of the urinary tract. Tidal drainage was instituted. The impression was that of acute onset of a myelopathy at the neurologic level of the first lumbar segment. The signs indicated spinal cord involvement of the upper motor neuron type. Associated with the signs of weakness and hyper-reflexia of the lower extremities, there was intense pain which was interpreted as being partly due to nerve irritation and probably to involvement of nerve tracts. The primary picture of upper motor neuron involvement with a level about the first lumbar segment changed to one in which there was complete absence of reflexes with complete loss of motor power. The sensory picture was one of segmental loss with some islands of preservation of sensation

in the lumbosacral segments. The opinion was that the condition resulted from intramedullary spinal cord bleeding of apoplectic or thrombotic origin. No neurosurgic intervention was recommended at that time.

On May 22, the patient was regaining sensation and motion in his legs. Pain in back of thighs and hips was severe. On June 6, 1947, there was increasing strength of his lower extremities. He was able to wiggle his toes, bend his knees, and raise his legs. There was slight numbness of his toes. By June 12 there was no difficulty in urination or defecation. He was given physiotherapy and improvement continued. At the time this report was written motor and sensory disturbances had largely disappeared. The patient is able to walk. There remains some atrophy of the muscles of the lower extremities.

The final diagnosis was hematomyelia involving the eleventh thoracic through the fourth lumbar segments.

REFERENCES

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ABDUCENS NERVE PALSY FOLLOWING SPINAL ANESTHESIA: A CASE REPORT

A man, 66 years of age, of Welsh descent, was admitted to the hospital June 23, 1947, for a transurethral resection because of benign hypertrophy of the prostate gland. He had been a miner for thirty-four years. Twenty years before admission (during the period as a miner) he had had "miners' nystagmus," but had had none since. For the past seventeen years, he had worn glasses for distant and near vision with satisfactory results. There was no history of syphilis. The Wassermann reaction was negative.

On June 25, 1947, the patient was given nembutal 0.1 Gm. at 11:30 a.m. and taken to the operating room. At that time the blood pressure was 130 mm. systolic and 80 mm. diastolic, the pulse 80, and respirations were 20. A spinal puncture was made with a 22-gauge needle, and 120 mg. of procaine hydrochloride was administered. Immediately before the spinal puncture ephedrine sulfate, 25 mg., was given subcutaneously. The level of anesthesia was established at the eighth thoracic segment. The blood pressure ranged from