

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.

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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

155 to 140 mm. systolic and from 100 to 90 mm. diastolic and the pulse from 120 to 90. The transurethral resection was completed in an hour. No eye symptoms or abnormalities followed the spinal anesthesia and operation.

On July 3, 1947, the patient was given nembutal 0.1 Gm. at 12 noon and morphine 4 mg., scopolamine 0.2 mg. at 1 p.m. The blood pressure was 140 mm. systolic and 90 mm. diastolic, the pulse 80, and respirations were 20. Without prophylactic vasopressor, a spinal puncture was made with a 22-gauge needle. Pontocaine 8 mg. and dextrose 80 mg. (10 per cent) mixed with 1.4 cc. of spinal fluid was administered. The level of anesthesia was established at the sixth thoracic segment. The patient was put in an exaggerated lithotomy position for perineal prostatectomy, which was completed in two hours and twenty-five minutes. During the procedure, he received 500 cc. of blood and 750 cc. of physiologic saline solution. The blood pressure ranged from 135 to 120 mm. systolic and from 85 to 80 mm. diastolic and pulse from 80 to 65. Respirations remained at 20. In this position, the patient was lying on the upper part of his back. He was actually in a Trendelenburg position, although the table top was parallel with the floor. For this reason, the sensory level may have extended higher than the sixth thoracic segment.

On the first postoperative day, the patient noted blurred vision and difficulty in reading. Mild photophobia was present also. On the third postoperative day, he had a frontal headache for several hours which was relieved by emesis of undigested food. About the tenth day after operation he first noted double vision on looking to the right side. Examination revealed partial paresis of the right external rectus muscle. There was binocular diplopia in the field of the right external rectus, indicating involvement of the right abducens nerve. By July 30, diplopia was barely detectable to the patient, and by August 14 it was entirely absent.

SUMMARY

Unilateral paralysis of the abducens nerve was observed in a patient one day after spinal anesthesia, produced by 8 mg. of pontocaine and 80 mg. of 10 per cent dextrose. The patient had received two spinal anesthetics within an eight-day period. This complication was noted following the administration of the second spinal anesthetic agent. The duration of the abducens paralysis was approximately six weeks.

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ACRYLIC TRACHEOSTOMY ADAPTER FOR INHALATION ANESTHESIA

Battle casualties with severe maxillo-facial injuries, especially those with mandibular and mouth involvement, present anesthetic problems at best. In some cases in which the tongue had no support and the airway was inadequate, prophylactic tracheostomy was performed before any further definitive surgical procedure was attempted.

The difficulty of induction and maintenance of anesthesia with a functioning tracheostomy has been solved by Holinger and Cassels by removing the tracheostomy tube and inserting an anode tube directly into the trachea (1). Another method is

to use the adapter as described by Sanders (2).

Neither of these methods was available at the front, so rubber and metal tubes between the tracheostomy tube opening and the anesthetic machine were used. All proved to be unsatisfactory. This was owing to the narrow lumen, increased dead space, leakage and physical instability of the system. These factors led to the idea of incorporating the tracheostomy insert into an acrylic adapter.

This adapter accommodates the tracheostomy tube to a short, wide-bore rubber tube leading to the machine. It is