UNUSUAL INCIDENTS FOLLOWING SPINAL ANESTHESIA: A REPORT OF TWO CASES

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Case 1.—A white soldier, 19 years of age, was hospitalized because of a painful varicocele. The history, as given to the surgeon, was of no significance aside from the admitting complaint. The physical findings were normal except for a medium-sized varicocele in the left spermatic cord. Laboratory examinations and roentgenograms of the chest were negative.

Preliminary medication consisted of secobarbital, 0.1 Gm., at the hour of sleep, and on the morning of the operation, secobarbital, 0.2 Gm., at 7 o'clock, and morphine sulfate, 0.01 Gm., at 7:30. The preanesthetic blood pressure was 122 mm. of mercury systolic and 80 mm. diastolic, and the pulse rate was 80 per minute. The patient was drowsy but rational following the medication. He weighed 145 pounds and was 5 feet 11 inches tall. At 8:20 a.m., a spinal anesthetic of 120 mg. of procaine crystals diluted with 3 cc. of spinal fluid was injected between the third and fourth lumbar spines. Ephedrine, 0.025 Gm., was injected subcutaneously at the site of the lumbar puncture.

Anesthesia was satisfactory until 9 o'clock, at which time the patient began to groan, grimace and turn his head from side to side. Although he was conscious, he would not answer any question as to what was disturbing him. Blood pressure and pulse rate had not altered. Perspiration was not observed on the skin. Morphine sulfate, 0.016 Gm., was injected slowly intravenously and subsequently he stopped groaning. The operation was completed at 9:20. The patient was conscious, and the blood pressure, pulse and respiration were the same as the preanesthetic reading.

Soon after the patient was taken to the ward, he began to complain of pain, and he thrashed about in bed as soon as muscular function returned to the legs. At 9:45 a.m., the surgeon administered morphine sulfate, 0.016 Gm., subcutaneously for pain. The patient continued to cry, groan and thrash until 10:15, when a placebo of normal saline solution was injected. At 10:25 the patient stopped thrashing and appeared to go to sleep. The attendant left the bed and, upon returning five minutes later, found the patient unconscious, deeply cyanotic and not breathing. The ward officer administered artificial respiration by the Schefer method for about seven minutes until the anesthetist could reach the ward. The patient was deeply cyanotic and the jaw was so rigid that the mouth could not be opened for the insertion of an airway. Oxygen was administered under positive pressure from an anesthetic gas machine for three minutes. The color gradually became normal and respirations were resumed at the rate of 22 per minute, were regular and of normal volume. The blood pressure, which had been 190 mm. of mercury systolic and 90 mm. diastolic during the cyanosis, returned to 126 mm. systolic and 80 mm. diastolic. The pulse rate was

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80. The pupil was in mild dilatation. The patient would not respond or open his eyes. Analectic drugs were not administered.

For the ensuing two and a half hours, the color remained normal. The respirations were 22 per minute and blood pressure readings and pulse rate were normal. The chest was normal to percussion and breath sounds were normal to auscultation. The pupils were of average size. The patient did not respond to ordinary stimuli. At 1 p.m. a neurologic surgeon made an examination and at the termination exerted strong digital pressure on the preauricular region on each side of the patient’s face, at which time he opened his eyes and cried out. After this time he remained conscious and was rational, although very quiet.

The patient made an uneventful convalescence until three weeks later when he complained of severe headache. During the hospital stay he was moody and refused to talk to others. He remained in the hospital for about two months, during which time he complained bitterly of headaches and stated that he wanted to die. He wandered about the corridors and appeared preoccupied and depressed. He stated that he was assigned to do manual labor in his antiaircraft team and he preferred a desk job or a place where he could do book work. In addition, he hated the army life. He entered the hospital not so much because of the varicocele, but to avoid the situation to which he could not adjust himself. A neuropsychiatric examination was carried out and a diagnosis of severe psychoneurosis established. He was given a medical discharge from the army.

Comment.—The cause of the respiratory arrest is not clear. The fact that the spinal anesthetic had worn off by 9:45 a.m. was shown by the patient’s ability to move his legs and body. He had no intercostal paralysis or dyspnea during the operation. The fact that morphine sulfate, 0.01 Gm., was administered at 7:30 a.m., 0.016 Gm. at 9 a.m., and 0.016 Gm. at 9:45 a.m., would lead one to suspect a cumulative overdosage of morphine. Respirations were 14 per minute during the operation. After the period of apnea the respirations were 22 per minute instead of the slow rate usually seen with overdosage of morphine. It does not seem likely that hysteria alone could be responsible for the respiratory arrest, although the sudden return from coma to the conscious state when painful stimuli were applied suggested a functional mental disorder. It was believed that the repeated doses of morphine, aided by this patient’s mental condition, produced this situation. I am convinced that the patient would have died had not artificial respiration with oxygen been performed with manual compression of the breathing bag.

Case 2.—An officer, 23 years of age, was scheduled for an operation for the removal of shotgun pellets from the plantar surfaces of both feet. Aside from the condition for which he was hospitalized, the history and the physical and laboratory examinations revealed nothing of significance. Spinal anesthesia was employed instead of local infiltration because there were areas of exudate around some of the pellets.

The patient weighed 170 pounds, was 5 feet 11 inches tall, and was of an average well-developed and muscular physique. Preliminary medication consisted of pentobarbital sodium, 0.1 Gm., an hour before operation, and morphine
sulfate, 0.01 Gm., half an hour before operation. At 9:40 a.m. a spinal anesthetic of 150 mg. of procaine crystals, diluted with 3 cc. of spinal fluid, was injected between the third and fourth lumbar spines. Ephedrine, 0.025 Gm., was injected subcutaneously at the site of the lumbar puncture. The patient was placed in the supine position with a large pillow under the shoulders and head to keep the thorax higher than the pelvis. Anesthesia was satisfactory.

At 10:15 a.m. the patient became nauseated. The blood pressure was 118 mm. systolic and 78 mm. diastolic and the pulse rate was 100 per minute. There was sensory anesthesia to the clavicle. Oxygen was administered continuously from the anesthetic machine. At 10:30 a.m. the blood pressure was 86 mm. systolic and 64 mm. diastolic. Ephedrine sulfate, 0.035 Gm., was administered intravenously. At 10:35 a.m. the patient exhibited marked dyspnea, with only diaphragmatic breathing in evidence. Oxygen was administered under positive pressure for five minutes and subsequently the dyspnea disappeared.

At 10:50 a.m. sensation returned to the legs and abdomen. The patient was able to move the legs. At 11:00 a.m. the blood pressure was 130 mm. systolic and 76 mm. diastolic. Although the dyspnea had disappeared, there was numbness of the chest and arms. The power of the hand grip was weakened. At 11:10 a.m. he complained of severe pain at the operative site. The blood pressure was now 146 mm. systolic and 98 mm. diastolic. Morphine sulfate, 0.016 Gm., was administered very slowly intravenously. There was relief of pain but no dyspnea or cyanosis followed the injection. The operation was terminated at 11:20 a.m. Sensory anesthesia of the chest and arms and the weakened power of grip were observed until 2:00 p.m. During the remainder of the afternoon and evening the patient had recurring episodes of "a warm sensation and pressure" in the chest. By the next day all symptoms had disappeared.

Comment.—Thirty-five minutes following administration, the anesthetic solution diffused to a level producing anesthesia to the clavicle. Anesthesia for the legs and abdomen disappeared completely in one hour and thirty minutes following administration. Anesthesia of the chest and arms did not disappear completely until four hours later. Dyspnea was present for no more than five minutes. The ampule from which the procaine crystals were removed was rechecked as to the name and dosage.

This is the first time in an eight-year anesthetic experience that I had observed such an occurrence. It is difficult to explain why the absorption of the procaine from the thoracic and lower cervical segments of the spinal cord was slower than the absorption from the lumbar and sacral segments. There was no history of a central nervous system disorder before the time of the spinal anesthetic and none was reported later.

Summary

Two cases are reported of unusual reactions following spinal anesthesia. In Case 1, respiratory arrest occurred in a severely psychoneurotic patient to whom an overdosage of morphine was administered following a spinal anesthetic. The patient was resuscitated. In Case 2, anesthesia persisted in the thoracic and lower cervical segments of the spinal cord for three hours following disappearance of anesthesia in the lumbar and sacral segments.
Report the appropriate anesthesia code for an obstetric patient who had a planned general anesthesia for cesarean hysterectomy. 01963. Rationale: Use the CPT® Index look for Anesthesia/Hysterectomy/Cesarean which directs you to 01963, 01969. A 30 year-old patient had anesthesia for an extensive spinal procedure with instrumentation under general anesthesia. The anesthesiologist performed all required steps for medical direction while directing one CRNA. What modifier(s) and CPT® code(s) is/are reported for the anesthesiologist and CRNA services? Because there was only one case, the appropriate modifiers to report are QY for the physician and QX for the CRNA. A QZ modifier would indicate the case was performed by a non-medically directed CRNA. Case report Post-spinal anesthesiainduced hearing loss: is there a need for increased patient awareness? C. Eickhoff 1 J.-P. Hering2 L.F. Gabel3 C. Boer1 P.K.E. Börjesson5 Introduction Cranial nerve dysfunction following spinal anaesthesia leading to hearing loss has frequently been described but large prospective studies are lacking. Case report We treated a 70-year-old male patient who underwent total knee replacement under combined spinal-epidural anaesthesia who developed hearing loss complaints after an unintended spinal puncture at the L2-L3 interspace with an 18G Tuohy needle. Hearing loss recovered completely two hours later, and the patient was discharged in good condition the next day. Citation: Bidaki R, Mirhosseni H, Avare R (2011) Breakneck Bradycardia Pursuant to Spinal Anesthesia: A Report of Two Cases. J Anesthe Clinic Res 4:293. doi: 10.4172/2155-6148.1000293. Copyright: © 2011 Bidaki R, et al. Abruptly bradycardia is one of the uncommon but fatal complication of spinal anesthesia and may occur at the any stage. Lethal complications during spinal anesthesia can occur in patients without problem in their respiratory or cardiovascular system. In this article, we present 2 cases with knee arthroscopy and pilonidal sinus excision that complicated with breakneck bradycardia follow to spinal anesthesia.