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Grand Mal Seizure after Fentanyl Administration

To the Editor:—We read with great interest the study by Carlsson *et al.*[1] on the effects of high-dose fentanyl on cerebral circulation and metabolism in rats, where they decribe seizure activity after high-dose fentanyl (200 or 400 μg/kg). The following is a report of a case where a patient developed grand mal seizures after the administration of 200 μg fentanyl.

A 79-year-old woman weighing 79 kg was admitted for total abdominal hysterectomy for cervical carcinoma. Her medical history was remarkable for a questionable syncopal episode, which was attributed to premature ventricular contraction (PVC) detected by Holter monitoring, for which she was placed on quinidine. The remaining cardiac and neurologic workup was normal.

She was premedicated with Robinul® 0.3 mg 45 min before arrival to the operating room. After placement of the appropriate monitors (ECG V5 lead, direct arterial pressure, and central venous pressure monitoring), anesthesia was induced with diazepam 5 mg iv and fentanyl 200 μg in divided doses. During this time ventilation was assisted with O_2 (100%) and the arterial pressure and heart rate remained unchanged. Within 2 min, generalized clonic motor activity was noted, which was successfully treated with 125 mg thiopental. The operation was canceled, and the patient was allowed to recover from the anesthetic. Her postoperative course was uneventful. A neurologic consult was sought immediately in the recovery room, and the neurologist's initial impression was that she had had a grand mal seizure related to fentanyl. Results of further neurologic examination were negative, and electroencephalographic testing was normal.

The patient underwent an uneventful general anesthetic 2 weeks later, and fentanyl was not given. Morphine sulfate was given for pain relief in the postoperative period without untoward effects.

Although it was mentioned in the discussion by Carlsson *et al.*[1] that seizures after narcotic administration have been seen in humans, such seizurelike activity has not been reported following fentanyl administration. The data by Carlsson *et al.* would confirm strongly that a narcotic-induced seizure occurred in our case. It is interesting that 5 mg of diazepam (Valium®) did not prevent the seizure and that the seizure occurred after such a small dose of fentanyl (200 μg). This is at odds with clinical experience and with Carlsson's study in which seizures occurred only after high-dose fentanyl. Nonetheless, we wish to report our experience of a grand mal seizure after a small dose of fentanyl so we may alert our colleagues to the possibility of seizures with fentanyl in humans.

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Collapse after Epidural Injection Following Inadvertent Dural Perforation

To the Editor:—I am intrigued by the possibility that the communications on this topic from Professor Hodgkinson[1] (United States) and Dr. Collier[2] (Australia) reveal yet another geographically determined variant of outcome of anesthetic practice.

We have inadvertently perforated the dura of 302 obstetric patients during the period from 1968 to the present in my service. Our initial response to this complication is to insert the catheter through another space (almost invariably an adjoining one). We have not encountered evidence that a massive spinal block or a massive subdural block has resulted from injecting a considerable volume of bupivacaine through a catheter so cited. Occasionally clear fluid is seen to drift slowly within the catheter after insertion. We assume that this is some of the cerebrospinal fluid that already has leaked