Sexual Illusions and Propofol Sedation

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Propofol (Diprivan) was recently approved by the Food and Drug Administration for use as a sedative during minor operative procedures. The short-acting effects of this drug have made it attractive for use in outpatient surgery. Its ability to induce unconsciousness without loss of respiratory function, combined with its rapid elimination, makes propofol a preferred agent for cases in which “deep” sedation is necessary.

Recently at our institution, two patients in whom propofol was used for sedation presented with unusual side effects. We report these cases of sexual illusion and disinhibition associated with the use of propofol to alert the practitioner to this potential problem.

CASE REPORTS

Case 1. A 20-yr-old woman with persistent low back pain secondary to a spinal ependymoma presented for intrathecal injection of analgesic medication. During the preceding 8 yr, she had successfully undergone 12 injections during which sedation with various opioids and benzodiazepines, but not propofol, had been used uneventfully. However, because of the patient’s complaint concerning the lasting sedative effects of the previous medication combinations, propofol was used for the current injection to minimize this undesirable side effect.

The patient was placed in the sitting position. She became extremely anxious while preparations were made for the intrathecal injection. Four 10-mg doses of intravenous propofol were given over approximately 10 min; these relieved her anxiety. While cannulation of the subarachnoid space was attempted with a 22-G spinal needle, an additional 20 mg propofol was given. During the needle placement, the patient began to relate, in explicit detail, her sexual encounters with her former boyfriend. Upon arrival in the recovery room 20 min later, the patient both recalled the discussion and expressed remorse about it.

Case 2. A 47-yr-old woman was brought to the operating room for the placement of a tunneled epidural catheter for pain management. She had undergone a left radical mastectomy 4 yr previously and now presented with severe pain as a result of metastases to several ribs and thoracic vertebral bodies. Chemotherapy and radiotherapy to the spine had not resolved the pain. The patient was sedated with sufentanil (50 μg) and midazolam (20 mg) before surgical incision. During the last 15 min of the procedure, propofol (70 mg) was given in divided doses. At the end of the procedure, as the effects of the sedation abated and the small incisions were being closed, she described the tattoo in her groin area and expressed the desire for those present to see it. Then she commented that this may not be possible because the tattoo might have been “swallowed” by her genitalia. After repeating these comments, she was taken to the recovery room without further incident.

DISCUSSION

These cases suggest that propofol, like other anesthetic agents, may disinhibit certain patients from verbalizing personal thoughts. Dundee noted the presence of sexual hallucination during midazolam sedation in healthy medical student volunteers. One student in particular, a 60-kg woman, attempted to withdraw from the study after receiving 0.17-mg/kg doses of midazolam and experiencing graphic sexual misconceptions.

Nitrous oxide has also been implicated in producing sexual arousal and hallucination at concentrations greater than 50%. Jastek and Malamed reported nine cases of sexual hallucination during nitrous oxide–oxygen sedation. Visual, tactile, and auditory stimuli all were implicated in the illusions.

In 1988, Hunter et al. reported five separate incidents of sexual arousal following propofol administration. Several patients made physical advances toward their anesthesiologists and inquired about the marital status and social availability of the professional. Two patients were explicit enough to embarrass the anesthesiologists. In 1988, Young reported a case in which propofol was administered to a young woman, who proceeded to shout amorously at her orthopedic surgeon for more than 0.5 h.

Bricker reported 130 propofol/alfentanil anesthetics for minor gynecologic vaginal procedures. Twelve percent of the patients displayed amorous and disinhibited behavior, often with the anesthesiologist being mistaken for the patient’s usual partner. It is noteworthy that Bricker

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also studied 70 patients undergoing abdominal laparoscopy using with the same anesthetic technique but with no reports of sexual arousal.⁸

Although the majority of case reports of this nature involve female patients and male anesthetists, Thomson and Knight⁴ reported that men also are susceptible. Three hundred male patients aged 19–90 yr were given propofol by a male physician without one incident of amorous behavior. However, another 40 patients were given propofol by a female anesthetist, with one report of a patient experiencing dreams about his anesthesiologist.⁴ In addition, Smyth and Collins-Howgill reported incidents of female recovery room staff fending off amorous advances of male patients after the use of propofol.⁵

Dundee reported that sexual illusions are uncommon after the use of small doses of midazolam (≤ 0.1 mg/kg).§ However, as our two cases clearly illustrate, disinhibition of patients can occur after small doses of propofol (0.8–0.9 mg/kg) used in combination with other agents. Unfortunately, in our second case, it cannot be unequivocally determined whether the midazolam or propofol caused the sexual misconception. However, only 2 mg midazolam was given (0.03 mg/kg), whereas 70 mg of propofol was used (0.93 mg/kg).

REFERENCES


An Epidemic of Hypoxemia in Two Intensive Care Units: Cause and Human Response

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Medical gas piping systems are relatively simple, yet there is substantial risk of severe patient injury if these systems become contaminated with a foreign gas. To minimize these risks, medical gas piping systems are carefully planned and installed according to rigorous standards.†‡ Despite these precautions, accidents involving medical gas systems may occur.

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Frequently, air is blended with oxygen to reduce the fraction of inspired oxygen (FiO₂) delivered to patients receiving mechanical ventilation. We describe an incident that led to contamination of the medical air pipeline and caused hypoxemia among mechanically ventilated patients in two adjacent intensive care units (referred to as ICU-A and ICU-B). The difficulty in preventing such events is discussed, and methods are suggested to reduce the potentially catastrophic impact of accidents such as this.

CASE REPORT

7:50 AM: Nurses in two adjacent intensive care units alerted residents that the low-oxygen alarms on many of the ventilators suddenly began to sound. Some of the patients who were monitored with pulse oximetry exhibited a reduction in Spo₂. No changes to the ventilators had been made recently, and no other problems had been noted. Resident physicians investigating the problem found that alarms were sounding for many, but not all, of the ventilators. The nurses also notified the respiratory therapists of the alarms. Suspecting a problem with the oxygen supply, the respiratory therapists alerted an employee in the Building and Engineering Department (B&E).