A case report: Reversal of narcotic-induced biliary spasm with nalbuphine hydrochloride

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This case report describes the apparent reversal of a morphine-induced biliary spasm by an intravenous dose of nalbuphine hydrochloride (Nubain®) in a 72-year-old female scheduled for carotid endarterectomy under general anesthesia.

A 72-year-old female was scheduled for carotid endarterectomy under general anesthesia, and upon preoperative evaluation presented a complex history. This included hypertension, five myocardial infarctions, four vessel coronary vessel bypass, seizure phenomenon, and cholecystectomy (20 years prior to admission).

At our institution, enflurane has been the agent of choice for carotid endarterectomy given the changes which have been observed on the EEG with sub-anesthetic levels of isoflurane. In light of the patient's history, it was planned to anesthetize the patient using either a neurolept or balanced technique rather than enflurane. Consequently, the patient was premedicated with diphenhydramine 50 mg PO and morphine sulfate 4 mg IM.

Approximately 1/2-hour after she had been administered morphine, the patient arrived in the operating suite. She was assessed as having a satisfactory effect from the premedication. At this time an intravenous line of D5LR was established and the patient was premedicated with diphenhydramine 50 mg PO and morphine sulfate 4 mg IM.

The patient was placed in the holding area. Shortly thereafter, the patient began to complain of upper abdominal pain, distinct from past anginal attacks. An ECG was unchanged from previous tracings.

Biliary spasm caused by the premedication was believed to be a contributing factor to the patient's discomfort. It was elected to attempt a reversal of the spasm. The agent of choice in the past has been naloxone, however, it was felt that its use would have an adverse effect on the anesthetic management of the case. The ideal agent in this particular instance would seem to be an agonist-antagonist drug. Nalbuphine hydrochloride has been used in this institution for several years to reverse respiratory depression without causing a reversal of analgesia following narcotic anesthessia. A recent study also demonstrated the effects of nalbuphine hydrochloride on biliary system dynamics.

The patient received 0.1 mg/kg of nalbuphine hydrochloride IVP, for a total dose of 5 mg. Approximately 5 minutes later, the patient reported that she was pain free. At that time she was taken to the operating room, induced, and proceeded to undergo an uneventful carotid endarterectomy.

Conclusion

This case report is presented for the purpose of offering an alternative for the patient with narcotic induced biliary spasm. In the past, the available alternatives were either to wait for the effect to subside or to administer naloxone, either of which might prove uncomfortable for the patient. In the case of this patient, we were apparently able to reverse a narcotic-induced biliary spasm without encountering an anti-analgesic effect. This method appears to be a viable alternative for use by professionals dedicated to the prevention and relief of pain.

REFERENCES


AUTHOR

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