Delayed Neuraxial Morphine-Induced Respiratory Depression; a Rare but Possible Adverse Event

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INTRODUCTION

Effective postoperative pain control is essential for rapid recovery and reduced hospital stay. Epidural analgesia is an established perioperative analgesic method, but intrathecal opioid administration can lead to complications, including respiratory depression. We present a case of a 70-year-old woman who experienced delayed postoperative respiratory depression following epidural morphine injection.

CASE PRESENTATION

A 70-year-old woman underwent a sigmoidectomy for recurrent diverticulitis under general anesthesia along with epidural catheter placement and administration of 100 mcg fentanyl, 2 mg midazolam, 100 mL propofol, and a total of 70 mg rocuronium via peripheral intravenous line and 4 mg of morphine via epidural catheter. Postoperatively, the patient initially appeared hemodynamically stable but became unresponsive eight hours later, exhibiting pinpoint pupils and a decreased respiration rate. The patient's weight, renal function, and urine output were within normal limits, ruling out other potential contributing factors. Continuous blood pressure and heart rate monitoring in the immediate postoperative period did not show any abnormalities until the sudden onset of respiratory depression. The rapid response to naloxone, a known opioid antagonist, confirmed the diagnosis of opioid-induced respiratory depression. The epidural was removed after the initial recovery. No further complications were observed, and she was discharged on postoperative day two.

DISCUSSION

- Opioids are effective but can cause severe adverse effects, including respiratory depression.
- Delayed respiratory depression can occur even with low doses, especially in elderly patients.
- Early recognition and intervention with naloxone are crucial.
- Improved communication between anesthesiology and surgical teams enhances patient safety.
- Comprehensive postoperative care should include thorough patient evaluation, careful opioid dosing, continuous monitoring, and established intervention protoco

CONCLUSION

- Epidural opioids effectively manage pain but carry risks of delayed respiratory depression.
- Vigilance in monitoring and timely naloxone administration can prevent complications.
- Clear communication and structured hand-offs between teams are essential for patient safety.
- Balancing pain control with safety measures optimizes outcomes.