

BACKGROUND

- There is no data in the literature on the efficacy of intrathecal clonidine for post-operative pain management in children undergoing surgery.
- We evaluated the efficacy profile of 1mcg/kg intrathecal clonidine (IC) versus 5mcg/kg intrathecal morphine (IM) for postoperative pain control in children undergoing urologic procedures.

METHODS

- We reviewed the electronic medical records of 97 patients (children under 13 years of age) who received IC or IM.
- Following variables were analyzed in post anesthesia care unit (PACU) and the inpatient unit (IP):
 - Pain scores (FLACC/NRS)
 - Oral and intravenous opioid requirements (mg/kg/day of morphine equivalent).
 - Vomiting
 - Pruritus
 - Cardio-respiratory complications
- We defined "PACU Data" as those observed in the first 2 hours after the end of the procedure and "IP Data" as those observed in the following 22 hours.

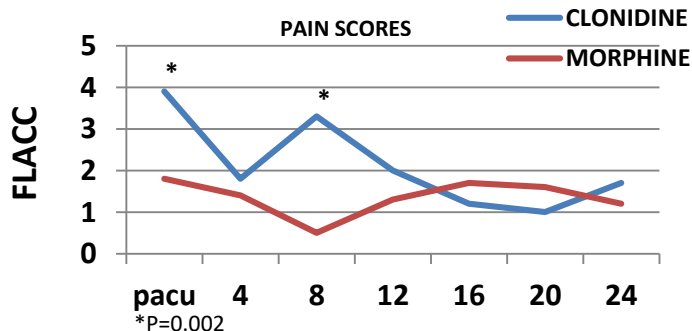
RESULTS

PACU:

- Higher pain scores for IC group vs IM group (3.9 ± 2.9 vs 1.8 ± 2.1) ($p=0.0002$).
- 29 patients (53%) of the IC group required opioids vs 4 patients (9%) in the IM group ($p=0.0001$) (0.06 ± 0.03 vs 0.04 ± 0.03 mg/kg) ($p=0.2$).

IP Unit

- Significantly higher pain scores for IC group vs IM group (2.2 ± 1.2 vs 1.2 ± 0.7) ($p=0.001$). However, the only time when pain scores were significantly higher after IC was at 8 hours after the end of surgery (Fig 1).
- The opioid requirements following PACU discharge was 0.06 ± 0.06 for the IC group compared to 0.08 ± 0.08 for the IM group ($p=0.14$).
- Higher incidence of vomiting after IM (41%) vs IC (18%) ($p=0.013$).
- Increased incidence of pruritus after IM (32%) compared to IC (0%).
- Brief episode of bradycardia that resolved spontaneously occurred in 4 patients (7.2%) in the IC group vs 2 patients in the IM group (4.9%).
- Two patients in the IM group (4.9%) required supplemental oxygen after being discharged from the PACU for hypoxemia.
- No severe respiratory depression requiring assisted ventilation or naloxone administration was observed in either group.



CONCLUSION

- Intrathecal morphine seems to provide superior analgesia in controlling post-operative pain after pediatric urologic procedures.
- Although the difference in pain scores between intrathecal clonidine and morphine is statistically significant the difference may not be clinically relevant.
- IC may offer fewer complications and may be better tolerated than IM.
- Future studies should focus on parents' preference by weighing pain control versus side-effects after these 2 techniques

REFERENCES

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