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Clonidine Caudal Combined with Dexmedetomodine IV for Awake Incision and Drainage of Septic Knee in 1 Month Old

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An infant undergoing invasive lower extremity orthopedic procedures is most often managed with a balanced general anesthetic with opiates and/or regional anesthesia; anesthetic techniques which reduce the need for postoperative opiates are preferred. Furthermore, recent concern amongst parents, as well as medical practitioners, regarding the potential detrimental effects of certain anesthetics on developing brains has prompted the increased interest in techniques which reduce the need for general endotracheal anesthesia.

We present a full term, one month old female with no significant past medical history who presented to the emergency department with right leg pain. The patient was found to have osteomyelitis of the right femur and septic arthritis of the right knee. She was started on ampicillin and taken to the OR on hospital day 2 for irrigation and debridement of the right thigh and knee. The patient received general anesthesia for the procedure without complications. On hospital day 3, pus was noted to be draining from the wound. Incision and drainage of the right knee was planned for day 4. The parents were opposed to repeated general anesthesia for this procedure given the recent exposure. The heightened anxiety stemmed from an online search revealing possible detrimental effects of a general anesthetic and they wanted to prevent exposure as much as possible. The parents wanted their baby to remain awake for the procedure. An extensive preoperative discussion amongst the attending anesthesiologist, surgeon and multiple family members commenced and the final decision was to attempt regional neuraxial anesthesia with sedation and general anesthesia as backup. An awake caudal with 4.5mL of bupivacaine with epinephrine and 4mcg of clonidine was performed. The patient received a total of 5 micrograms of dexmedetomodine intravenously and a pacifier with sweeties for sedation. Throughout the procedure, the patient remained awake and comfortable, and all vital signs remained stable. She did not require any opiates postoperatively and received a single dose 70mg of Tylenol the next day for analgesia. FLACC scale was used to assess for pain.

This case highlights the utility of a regional neuraxial anesthetic with sedation in infants as young as 1 month. Furthermore, it demonstrates the safety and efficacy of combining clonidine and dexmedetomodine via different routes for both prolongation of caudal analgesia and intraoperative sedation. We believe this technique should be considered in those patients for whom endotracheal anesthesia or opiates should be avoided.