Physicians expand use of spinal anesthesia for surgery in babies, cutting recovery time and costs

Promising results from innovative method presented at national conference by Elizabeth Soukup, MD

Manchester, NH—A team of Elliot Hospital physicians is successfully using spinal anesthesia in infants undergoing major surgery, thereby eliminating the need for general anesthesia and its known side effects and risks.

Spinal anesthesia is a procedure in which numbing medicine is introduced into the back to block sensation and movement of the lower half of the body. It is rapidly placed, often completed within a few minutes after entering the operating room, in contrast to general anesthesia where preparation time can often exceed an hour or more to go to sleep and wake up after surgery. After the procedure, babies are immediately brought to the recovery room and do not need time to wake up, as they would after a general anesthesia.

General anesthesia in both babies and the general population introduces more risk and postoperative complications, including the need for breathing tubes and intensive oxygen and heart monitoring. In addition, the FDA issued a warning in 2016 regarding general anesthesia in young children due to concerns about the risk of neurodevelopmental effects of general anesthesia.

While spinal anesthesia has previously been used on occasion for select situations in babies, the Elliot team was motivated to offer this technique for more complex surgical and laparoscopic procedures, and in older or more high-risk infants who could still benefit from avoidance of a general anesthesia. In addition to providing good outcomes for babies, “the use of spinal anesthesia turns out to be a more efficient operating room experience, decreasing the time and therefore cost of the operation,” states Elizabeth Soukup, MD, the lead pediatric surgeon on the study.
The team began to use spinal anesthesia in more complex procedures, both open and laparoscopic (minimally invasive), surgery of the abdomen, pelvis, chest wall, and lower extremities. The benefits were dramatic: Complex surgery with a spinal anesthesia was just as safe and effective, with the same benefits, including often avoidance of overnight hospital stays, which may be needed after a general anesthesia.

Parents and families are thrilled with the experience. “At first, parents are terrified that their child will need surgery, and most of their worry comes from the idea that their baby will have to go to sleep. When we talk to parents about spinal anesthesia, their anxiety just melts away, and they are grateful for this option,” adds Soukup.

These findings were presented in May 2019 at the American Pediatric Surgical Association’s (APSA) annual meeting in Boston, where over 1,000 pediatric surgeons were in attendance. Dr. Soukup, the lead author of the associated study, showed that of the most recent 149 surgeries attempted with spinal anesthesia at the Elliot Hospital, spinal anesthesia was used successfully 99.3 percent of the time. Eighty-one of the patients underwent laparoscopic surgery, which previously had not been thought to be possible for the spinal approach. Patients who underwent spinal anesthesia ranged in size from tiny premature babies, up to toddlers 14 months of age. There were no respiratory or spinal complications in any patients.

Soukup credits the Elliot’s success to the exemplary training and expertise of this close-knit team: Charles Eastwood, MD, pediatric anesthesiologist; Jessica Bland, MD, pediatric anesthesiologist; Amanda DuBois, pediatric surgery APRN; and the newest member Meghna Misra, MD, pediatric surgeon.

**Note to reporters:** The Elliot team is available for interviews.

About Elliot Health System, a member of SolutionHealth - Elliot Health System is a non-profit organization serving the healthcare needs of the community since 1890. The largest provider of comprehensive healthcare services in Southern New Hampshire, Elliot Hospital, a 296-bed acute care facility and the first community hospital in the state, serves as the cornerstone of the health system. Elliot is home to Manchester’s designated Level II Regional Trauma Center, Elliot Breast Health Center, Elliot Urgent Care, a Level 3 Newborn Intensive Care Unit, Elliot Medical Group, Elliot Regional Cancer Center, Elliot Senior Health Center, Visiting Nurse Association of Manchester and Southern New Hampshire, 1-Day Surgery Center, Elliot Memory & Mobility Center, NH Arthritis Center, Elliot Retail Pharmacy, Elliot Medical Centers in Bedford, Londonderry, Hooksett, and The Elliot at River’s Edge.

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