Preterm infants have a high incidence of postoperative apnea after inguinal herniorrhaphy. (1) For this reason, spinal anesthesia has been advocated as preferable to general anesthesia for this group of infants. Though the incidence of postoperative apnea is lower when spinal anesthesia is used without additional intravenous sedative agents, (2-4) it still occurs with relative frequency and cardiorespiratory monitoring for 12 – 24 hours postoperatively remains necessary. (4-6) Additionally, inguinal hernia repair in the preterm infant is more technically challenging and operative time can be significantly longer in these smaller infants.(7,8) A recent Cochrane Collaborative review found that technical failures in placement occur in 1 out of 7 subarachnoid blocks and inadequate anesthesia requiring supplemental agents occurs in 1 out of 3 spinal anesthetics. (9) After systematic review, their conclusions were: “The evidence to date does not support a clinically meaningful benefit of spinal anaesthesia over general anaesthesia for preterm infants undergoing inguinal herniorrhaphy in early infancy. The potential benefits of a reduction in postoperative apnoea have to be weighed carefully against the high failure rate to achieve the accurate placement of a spinal needle and the high rate of anaesthetic agent failure.”

General anesthesia provides optimal surgical relaxation and no restrictions on operative time. Postoperative apnea can be virtually eliminated with a single dose of prophylactic intravenous caffeine (10 mg/kg of caffeine base, 20 mg/kg of caffeine citrate) as demonstrated by Welborn and colleagues (10) and reaffirmed in a recent Cochrane Collaborative review. (11) As with hernia repair in older infants, postoperative analgesia can be provided with caudal analgesia and obviate the need for perioperative opioids. Though caudal analgesia has been provided by some practitioners in association with subarachnoid blockade, the report by Desparmet of total spinal anesthesia suggests caution with this approach. (12)

References: