

Implementation of Hummingbird PE Tube Placement in Procedural Sedation

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Introduction: The most common childhood procedure, Myringotomy tubes (PE Tubes) can be successfully performed on children outside of the operating room under moderate sedation. Children's Minnesota successfully transitioned Hummingbird PE Tubes out of the operating room into a sedation unit using moderate sedation in August, 2016. A patient specific process was developed in collaboration with sedation providers, ENT Surgeons, and nursing to provide adequate sedation and pain management without being anesthetized. Backup sedation plans were devised to facilitate same day tube placements for patients that could fail moderate sedation. As of March 2017, Children's Minnesota has been successfully placed 18 PE Tubes in the sedation unit with reduced patient stays, reduced post-operative cares, and improved patient/family satisfaction.

Methods: Utilizing anesthesia and critical care colleagues, along with ENT providers and nursing staff a plan was developed using a tailored drug combination for moderate sedation that is appropriate for this patient population and achieves the desired effects to facilitate PE tube placement. The patient receives 2mcg/kg of intranasal fentanyl prior to nitrous administration. The patient's then receive nitrous oxide during phenol application and throughout the procedure, titrated to effect. In addition a child life provider incorporates distraction methods in a quiet environment throughout the procedure. A quality questionnaire is provided to each patient/family.

Results: Children's Minnesota has successfully transitioned PE Tubes into a sedation unit while freeing up operating rooms for more complex procedures. Children's Minnesota has successfully placed 17 tubes over 7 months, with zero children requiring a higher level of sedation or general anesthesia.

Discussions: PE Tubes can be successfully placed outside of the operating room under moderate sedation. Next steps include increasing the volumes of PE Tubes inserted on a daily basis, offer options to have PE Tubes placed on the same day as their ENT consult, eliminating multiple doctor appointments for patients/families, and increasing awareness to local providers.

References:

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