**Intranasal Sedation for MRI Scans in Children: A Retrospective Review**

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**Introduction:** Recent clinical studies on the usage of intranasal sedative administration for non-invasive diagnostic studies in children show safety and efficacy of this sedation modality. (1-3) These studies show testing completion rates of 89% or greater with very favorable adverse event profiles. We report our retrospective experience with a non-invasive sedation regimen for the completion of MRI imaging in children.

**Methods:** After IRB approval, we reviewed the records of 470 children who received intranasal (IN) sedation for MRI scanning from January through December of 2015. After review of the literature, our sedation service protocol describes an intranasal sedation regimen of dexmedetomidine of 3 to 4 mcg/kg with 0.1 mg/kg of midazolam for children undergoing MRI scanning. Demographic and clinical data were collected for statistical analysis, to include information about adverse events and recovery times.

**Results:** A total of 244 children underwent non-contrast MRI scan (59% brain, 31% spine, 9% brain/spine, and 2% other body part. Of these, 243 (99.6%) had successful completion of their MRI scan. Of these, 226 or 92.6% of the patients had an appropriate level of sedation to successfully start their MRI scan, with 17 or 7.0% of the patients not satisfactorily sedated and required IV sedation (mostly Propofol) to complete their examination. 11 children (or 4.5%) awakened during the MRI scan and required IV sedation. A total of 215 children (88.1%) completed their MRI examination without IV sedation. (See accompanying diagram)

**Conclusion:** An intranasal sedation regimen as we have described has a very acceptable success rate and favorable safety profile. This sedation regimen may allow more clinicians to provide sedation services to children who require sedation for radiologic imaging.

**Refs:**