Pediatric Procedural Sedation for Radiologic Imaging and Electroencephalogram at a Tertiary Care University Teaching Hospital in India

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Introduction:
Although Pediatric Procedural Sedation (PPS) using propofol is routine in the United States, its use is restricted to anesthesiologists in many other countries like India. As a result the pediatric providers have to use other drugs for PPS. We aim to report a single center experience of children receiving PPS at a tertiary care university teaching hospital.

Methods:
Retrospective chart review of PPS from April to September 2015 at Goa Medical College, Goa, India. PPS was provided by pediatric senior resident, supervised by a pediatric consultant, both certified in PALS and with experience in non-propofol PPS. We collected demographics, drug and dosing information, indication for PPS, procedure success rates and adverse events. Sedation related minor adverse events are complications during PPS, which are easily handled, and not expected to be associated with any sequelae.

Results:
110 PPS were performed in 6 months: MRI 58(52.7%), CT scan 31(28%), EEG 15(14%) and other procedures 7(6.3%). Median age was 18 months (range: 12-30), 57(51.8%) were male, and 106 (96.4%) were ASA I or II. Only 77(70%) were NPO ≥ 6hrs for solids. PPS was successful in 94(85%) sedations. Primary agent used for PPS: midazolam (MID) IV 74(67.3%), dexmedetomidine (DEX) IV 21(19.1%), and chloral hydrate PO in 15(13.6%). Ramsey sedation score of 3 or greater was not achieved in 34(30%) sedations and required a second drug: DEX 22(64%) and MID 12(35.9%). No patient experienced a serious adverse event. Sedation related minor AE’s such as change in heart rate (>25% from baseline) 32(54%), oxygen desaturation (<90% for 30 seconds) for 23(20.9%), hypotension 10(9%) were observed. Only 16(14.5%) required O2.

Discussion:
Drugs like MID, DEX and CH are utilized for PPS with no serious AE. Sedation related minor AE’s (46%) and failure rates (15%) were higher than reported with PPS with propofol.