

PS-069 IN-HOSPITAL OUTCOMES FOLLOWING TRACHEOSTOMY IN INFANTS

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Background and aims Tracheostomy is performed in infants with airway anomalies or requiring prolonged mechanical ventilation (MV). Risks and outcomes are described only in small studies. We report risk factors for mortality following tracheostomy in a large cohort of infants.

Methods We identified all infants discharged from 348 NICUs managed by Pediatric Medical Group who underwent tracheostomy between 1997 and 2012. We only included infants cared for at a single site. We performed multivariable logistic regression with random effects for site to evaluate association between death after tracheostomy and risk factors: diagnosis, gestational age, small for gestational age (SGA), age at tracheostomy, and days exposed to fraction of inspired oxygen >40%, inotropes and MV prior to tracheostomy.

Results 532 infants required tracheostomy (0.06% of infants). Median gestational age and birth weight were 26 weeks (IQR; 25, 30) and 780 g (610, 1400). The most common diagnoses were bronchopulmonary dysplasia, 465/532 (85%), airway anomalies, 237/532 (45%) and pulmonary anomalies, 88/532 (17%). Tracheostomy was performed on median postnatal age of 87 days (36,128). Of the 532 infants, 344 (65%) were weaned off MV prior to discharge at a median of 6 days (3, 12) after tracheostomy. Mortality was 14%. On multivariable regression, the following were associated with mortality: days of oxygen exposure, OR = 1.01 (95% CI; 1.00, 1.02); inotrope exposure, OR = 1.04 (1.00, 1.09); SGA, OR = 2.40 (1.32, 4.35).

Conclusion While tracheostomy is rarely performed, mortality after the procedure is high and is associated with increased by pre-tracheostomy oxygen and inotrope exposures and SGA status.

PS-070 FUNCTIONAL ENDOSCOPIC SINUS SURGERY IN CHILDREN

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The aim of the study was the optimisation of surgical treatment in children with chronic and recurrent [em1] rhinosinusitis. The work is based on comparative study of results after surgical treatment of 289 children with recurrent and chronic rhinosinusitis. The age of the children ranged between 3–15 years old, 188 males (65%) and 101 females (35%).

Methods Inconformity with the method of the treatment all the patients were divided in 2 groups. In the patients of the first group (84 children) the standard endoscopic sinus surgery was performed. This method includes: the relatively large ablation of all the anatomical structures from operation zone (processus uncinatus, ethmoid cells, ostium of sinus maxillary). In the patients of the second group (205 children) the minimally invasive endoscopic sinus surgery was performed. This modification

includes partial resection of processus uncinatus and limited ablation of all the anatomical structures of ostiomeatal complex.

Results The duration of the treatment in patients from the I group was $6,15 \pm 0,24$ days, in the children from the II group it was $4,26 \pm 0,25$ days, with statistic differences between the II and the I group ($t = 7,15$; $p < 0,001$). The patients were considered recovered if all the symptoms were absent over a period of 36 months. The good results were determined in 73,7% of the patients in group I and in 85,7% in the group II.

Conclusion The best results were obtained in patients who have undergone the minimally invasive endoscopic sinus surgery.

PS-071 MODIFIED SURGERY IN CHILDREN WITH PERSISTENT AND RECURRENT OTITIS MEDIA

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Background and aims The effectiveness of classical tympanostomy in persistent and recurrent otitis media (OM) with presence of mucous effusion during surgery is unclear. We elaborated the modified technique of surgery in order to improve the complete aspiration of viscous content from posterior part of tympanic cavity. This study was conducted to determine the effectiveness of the modified type of tympanostomy.

Methods A total of 67 children (134 ears) with OM and mucous viscous content during the myringotomy were included in Project. All cases were divided into two groups according to technique: simple (Group S) versus modified (Group M). Clinical and audio logical examination was performed every 3 months during 1 year after surgery. Otomicroscopical evaluation of ears was done under general anaesthesia in 12 months after tympanostomy, at the time of tube removal. Presence of retractions, adhesions, granulation tissue and effusion was noted.

Results Recurrence of OM was characteristic for 19% of ears from Group S and 2% of ears from Group M. Undulating hearing loss was recorded in Group S in 34% of cases, comparing to 7% of Group M. Attic retraction and adhesions in Group S were noted in 14%, in Group M – in 3% of cases.

Conclusion Modified technique of tympanostomy is more effective than simple one in preventing of hearing loss, formation of attic retraction, adhesions, recurrence of effusion and granulation tissue in children with persistent and recurrent OM and presence of mucous effusion during surgery.

PS-072 ASSESSMENT OF FACTORS AFFECTING PRE-OPERATIVE ANXIETY AND COMPLIANCE TO ANAESTHESIA INDUCTION IN SCHOOL-GOING CHILDREN

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Background and aims Effective pre-operative preparation program to address child's anxiety and thus improve the quality of anaesthetic induction would need to identify the factors that affect pre-op anxiety. The factors that influence pre-operative

anxiety in school-going children is likely to be different in Asian countries due to differences in socio-economic milieu. Therefore, we undertook a study to assess the factors affecting pre-operative anxiety and induction compliance in school-going children in India.

Methods After approval of Institutional Ethics Committee and written informed consent, an observational study was conducted in 60 ASA I/II children aged 7–12 years scheduled for elective surgery in a tertiary care teaching hospital. Data was collected on various possible predictors of anxiety. Child's pre-operative anxiety was assessed as reported by the child using State-Trait Anxiety Inventory for Children (STAIC) and as observed by an independent observer using modified Yale Preoperative Anxiety scale (mYPAS). The quality of induction was assessed by Induction Compliance Checklist.

Results All the 60 enrolled children completed the study. 48% of the children had mYPAS scores >30 indicating high baseline anxiety. The parameters found to significantly influence anxiety by logistic regression were: child's anxiety (STAIC) ($p < 0.001$) and parental anxiety ($p = 0.006$) and socio-economic status ($p < 0.001$). Notably, ambulatory procedures, previous surgical experience and visit to pre-anaesthesia clinic had no influence on the anxiety expressed by children. Baseline anxiety was significantly correlated with anxiety at parental separation.

Conclusion Anxiety is a significant problem in the pre-operative period in school-going children of developing countries and is inadequately addressed in the current practice.

PS-073 MISSED OPPORTUNITIES OF NUTRITIONAL REHABILITATION IN CHILDREN ADMITTED TO SURGICAL WARDS IN INDIA

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Background and aims 'Treat the patient not just the disease' is guiding principle of holistic health. Malnutrition in children has serious consequences to health as well as economy in the long term. We studied the prevalence and treatment of Malnutrition in children admitted to surgical wards.

Methods Retrospective study of 100 randomly selected medical records out of 980 patients of age <5 yrs. admitted in Surgical wards from 2009–2013. Socio-demographic data, nutritional parameters, clinical profile and nutritional rehabilitation status were audited. Four files were misplaced/active during the study and could not be audited.

Results Most patients were from general surgery ward (63 [65.6%]), males (62[64.6%]) and from rural areas (53[55.2%]). Of the 96 records, 7 (7.3%) and 26 (27.1%) have height and weight respectively and these were noted in Pre Anaesthesia Checkup or Dietary Assessment Chart rather than surgeon's notes except one case. Nutritional status couldn't be ascertained by the investigators due to insufficient data in 26 (27.1%) cases. In the remaining 70 (72.9%) cases; malnutrition was present in 27 (28.1%) cases (moderate in 16 (16.7%) and severe in 11 (11.5%)). Nutritional Rehabilitation was required in 42 (43.8%) cases but was not advised or provided. No significant association between malnutrition and socio-demographic profile was observed.

Conclusion The study indicates gender preference in health seeking and also points toward missed opportunities of diagnosis

and rehabilitation of malnutrition in children admitted to surgical departments. Checklists to screen for malnutrition and rehabilitative management can improve the holistic management that will help reduce the malnutrition burden.

PS-073a HYPOTONIC VS ISOTONIC SERUM AND PLASMA SODIUM LEVELS AFTER GENERAL SURGERY IN CHILDREN: CLINICAL TRIAL

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Objective To evaluate the risk of hyponatremia following administration of hypotonic (HT) or isotonic (IT) fluids in postoperative paediatric patients.

Methods Randomised controlled trial phase IV. Surgical paediatric patients who required IV fluids for at least 6 h, aged 6 months to 15 years, >6 kg weight, serum sodium 130–150 mEq/L at admission were included. Patients were randomised to receive 5% dextrose 0.3% saline solution (HT) or 5% dextrose 0.9% saline solution (IT). We analysed plasma levels of sodium, calcium and potassium on admission, 8, 24, 48 h and PICU discharge. Statistics analysis $p < 0.05$.

Results 137 patients were included, 66 HT and 71 IT. Baseline characteristics were similar in both groups. The highest frequency of hyponatremia occurs at 8 h (20.5%) and 24 h (27.3%) of income. Patients receiving HT fluid have at greater risk of developing hyponatremia than those receiving IT fluid at 8, 24 h and at discharge. Sodium levels are shown in table. The risk is 12.5 (OR 12.5 95% 3.49- 45.1) times higher at 8 h and 5.4 (1.28–23.37) times higher at 24 h. Severe hyponatremia (<125 mEq/l) occurred in only 1 patient, and 6 moderate (130–125 mEq/l) hyponatremia. There was no significant risk of hypernatremia in the IT group. Ionic calcium concentration 1.15–1.3 mmol/l, potassium 3.6–4.4 mEq/l.

Conclusions Postoperative paediatric patient have more risk of hyponatremia if they receive an HT fluid. Calcium and potassium supplements are not needed at least in the first 24 h.

Genetics and Digestive Diseases

PS-074 HEME OXYGENASE-1 GENE PROMOTER POLYMORPHISM AND INSULIN RESISTANCE ARE ASSOCIATED WITH SUSCEPTIBILITY TO NON-ALCOHOLIC FATTY LIVER DISEASE IN CHILDREN

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Background and aims The pathogenesis of paediatric nonalcoholic fatty liver disease (NAFLD) has not been fully elucidated. This study aimed to assess the association of the length of (GT)_n repeats in HO-1 gene promoter and insulin resistance with NAFLD among obese children.

Methods A total of 101 obese children aged 6–17 years were recruited. The diagnosis of NAFLD was made by liver ultrasonography. Anthropometric, serum biochemical variables and biomarkers for glucose and insulin metabolism were measured. We