Intranasal midazolam for pediatric sedation during the suturing of traumatic lacerations: a systematic review (Children (Basel). 2022;9:644)

Sedation is always challenging in children; to decrease the adverse effects, non-parenteral routes are increasingly being investigated. This systemic review has evaluated the efficacy of intranasal sedation for suturing of traumatic laceration in children. Authors reviewed 9 randomized trials including 746 children out of which 377 received intranasal midazolam in emergency settings. No significant differences in the initiation of sedation and the suture procedure were found between the intranasal route and the parenteral route. The use of intranasal midazolam in healthy children is effective for sedation in pediatric emergency departments for laceration repairing.

Sonographic optic nerve sheath diameter measurements in pediatric head trauma (J Ultrasound. 2022, April 8. Epub ahead of print)

Optic nerve sheath diameter (ONSD) is used as non-invasive technique for estimating raised intra cranial pressure (ICP) in adults but its accuracy in children is always questioned. In this prospective study, authors compared the ONSD in CT images with ultrasonographic measurements in children with head trauma and raised ICP. To predict elevated ICP, the AUC for ONSD at 3 mm was 0.956 (95% CI 0.896-1). At a cut-off level of 5.1 mm, the sensitivity and specificity of ONSD for elevated ICP were 92.9% and 94.0%. All sonographic ONSD measurements and ratios were significantly correlated with readings calculated from cranial CT images. Hence, bedside ocular US seems to be a promising and useful tool to determine ICP in children with head trauma.


There is always a dilemma in resuming physical activity (PA) following concussion injury in children. In this multicenter, single-blinded randomized clinical trial, authors have randomized 456 participants (10-18 y) with concussion, in 4-week stepwise return-to-PA protocol at 72 hours post-concussion even if symptomatic (experimental group (EG)) or to a return-to-PA once asymptomatic protocol (control group (CG)). No AE were identified. ITT analysis showed no strong evidence of a group difference at 2 weeks (adjusted mean difference=−1.3 (95% CI:-3.6 to 1.1)). Symptoms at 2 weeks did not differ significantly between children/youth randomized to initiate PA 72 hours post injury versus resting until asymptomatic. Hence, resumption of PA is safe and may be associated with milder symptoms at 2 weeks.


In this randomized controlled trial, authors investigated whether a single dose of oral dexamethasone (a single dose of 0.3 mg/kg) is non-inferior to prednisolone (1 mg/kg per day for 3 days) in the emergency department (ED) treatment of asthma exacerbations in children (2 to 16 years). Out of total 245 enrolments authors did not find any difference in PRAM scores at day 4 (0.91 versus 0.91; absolute difference 0.005; 95% CI -0.35 to 0.34) in both the groups. Sixteen children (13.1%) in the dexamethasone group received further systemic steroids within 14 days after trial enrolment compared with 5 (4.2%) in the prednisolone group (absolute difference 8.9%; 95% CI 1.9% to 16.0%). The hospital admission rates or the number of unscheduled return visits to a health care practitioner were similar in both the groups. Hence, single dose dexamethasone can also be used for acute exacerbations of asthma in children.

Every one-minute delay in EMS on-scene resuscitation after out-of-hospital pediatric cardiac arrest lowers ROSC by 5 (Resusc Plus. 2020;5:100062)

Prehospital care plays important role in the survival of out of the hospital cardiac arrest victims. In this study, authors tried to determine which aspect of pre-hospital care impact outcome after cardiac arrest. They consecutively studied data of 133 pediatric cardiac arrest, 20 children achieved return of spontaneous circulation (ROSC) and 9% children were discharged alive. Epinephrine administration (P <0.001), bystander treatment before EMS arrival (P=0.002), older age (P<0.002), shorter time to EMS arrival (P=0.005), and AED placement were predictors of ROSC. The only significant predictor of survival to hospital discharge that was identified was shorter time to EMS arrival (P=0.001). Each additional minute for the EMS to arrive resulted in 5% decreased odds of ROSC and hospital admission, and 12% decreased odds of surviving to hospital discharge.

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