Postoperative Hyperalgesia in Children After Oncology Surgery Correlates with Raised Level of Cortisol, Interleukin 6 (IL6), IL8 (IL8) and C-Reactive Protein (CRP)

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10.1136/archdischild-2014-307384.1535

Background: The mechanisms contributing to postoperative hyperalgesia (PH) in children are multifactorial. Recent evidence suggests a potential pathogenetic role for inflammation.

Objective: To examine the relationship between serum concentrations of inflammatory mediators, cortisol (hydrocortisone) and PA after oncology surgery.

Methods: Prospective observational study involving children with PH after oncology surgery and normal controls. All patients after operation received adequate analgesic therapy (continuous infusion opioid analgesics). Blood samples were taken at birth and 8 h, 24 h and 42 h for cytokines, cortisol and CRP after surgical procedure. The area of hyperalgesia for punctuate mechanical stimuli around the incision was measured 48 h after the operation with a hand-held von Frey filament. For statistical analysis 2 tests were used.

Results: 26 children (12.2 +/- 2.4 years) with PA and 20 controls (12.8 +/- 3.1 years) were enrolled. 14/26 (53.8%) children with PH required mechanical ventilation. Children with PA had more than threefold higher serum levels of interleukin 8 (IL8) than the controls (p < 0.05). At 8 h, 24 h and 42 h, serum IL6 and CRP were 2.43-fold higher in neontates than the controls group (p < 0.003). All patients with PH had significantly (p < 0.001) higher plasma cortisol levels over control group (mean +/- SD, 464.42 +/- 56.40 vs. 202.21 +/- 37.30 micromol/l on 8 h; 752.02 +/- 96.4 vs. 308.12 +/- 100.1 micromol/l on 24 h; 600.04 +/- 62.3 vs. 302.8 +/- 51.2 micromol/l in 42 h).

Conclusion: This study demonstrated that postoperative hyperalgesia syndrome is associated with raised blood levels of proinflammatory mediators and cortisol, suggesting that inflammation contributes to the PA.

Therapeutic Options for Conductive Hearing Loss in Children with Cleft Palate

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10.1136/archdischild-2014-307384.1536

Background and aim: Cleft lip and palate is a common congenital malformation correlated with otological disorders like Eustachian tube dysfunction, otitis media with effusion and conductive hearing loss correlated with speech disorders.

Methods: In our study we evaluate the therapeutic options for the conductive hearing loss in children, such as: middle ear ventilation tube insertion, hearing aids and adenoidectomy.

We conducted a retrospective chart review on 19 patients who underwent last follow-up during 2013, aged between 1 and 16, affected by cleft palate. We identified 3 cases of Treacher-Collins syndrome, 2 cases of CHARGE syndrome, 2 case sof Pierre Robin, 1 case of Goldener and 1 case of Di George syndrome. In 9 cases the cleft palate was isolated. In 14 cases we conducted phoniatric and logopaedic evaluations and 10 of these showed a speech disorder.

Results: We found a conductive hearing loss in 12 of the 19 children, 2 of these patients used hearing aids with an improvement of speech performance; 1 patient underwent adenoidectomy for the appearance of sleep apnea but he modified his quality of voice with hypernasality and nasal emission after surgery; finally 9 children had spontaneous resolution of otitis media with effusion.

Conclusions: In conclusion we found that the more effective way to resolve the problem of conductive hearing loss and the resulting speech disorder is to use the hearing aids until the resolution of the hearing loss, which normally occurs around 7 years old.

Management of Giant Congenital Melanocytic Nevus: A Single Centre 20 Years Experience

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10.1136/archdischild-2014-307384.1537

Background and aim: Giant congenital melanocytic nevus (GCMN) is a pigmented lesion present at birth with wide extent on the skin surface. This study aimed to assess the management of these lesions, which remains controversial and needs to take into consideration the perceived risk of melanoma, the patient’s age, the cosmetic outcome, the surgical complexity, and the anesthesiological risk.

Methods: This was a retrospective analysis and review of all records of children observed at the Paediatric Surgery Department of the University-Hospital of Ferrara between 1991 and 2011 and treated for GCMN.

Results: Twelve patients (median age 7 years, range 0.5–14) with GCMN were reported during the study period. Neurocutaneous melanosis was documented only once. Four patients underwent staged excision with grafting, two dermabrasion, and six implantation of skin dilator-expanded flap transfer. 2/12 lesions were macroscopically completely excised. Compliance to therapy was close to 100%. Metastatic melanoma from an unknown primary was documented only once. Four patients underwent staged excision with grafting, two dermabrasion, and six implantation of skin dilator-expanded flap transfer. 2/12 lesions were macroscopically completely excised. Compliance to therapy was close to 100%. Metastatic melanoma from an unknown primary site and death occurred in 1/12 (mean follow-up, 14 years).

Conclusions: Decision making process to produce a final treatment choice for GCMN can be really complex. Regardless the outcome of therapy, a close regular post-operative follow-up prevent or exclude possible complications proved to be useful in children with GCMN.

Withdrawn

Poster abstracts