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Book of Abstracts

Anamnestic, clinical and laboratory diagnoses versus echotomographic confirmation of acute appendicitis association to the intraoperative findings

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Abstract

Background: Acute appendicitis in pediatric population is one of the most common diagnose. Early recognition and treatment are crucial for better outcome. Some pediatric associations give guidelines criteria based on clinical and radiological signs. Literature argues that modern radiographic imagine techniques show more accurate diagnoses and early surgical treatment with better intraoperative findings. The aim of this study was to compare the intraoperative findings of the appendix in children who were diagnosed in two different methods.

Method and material: In prospective study 60 children, ASA I/II, who underwent appendectomy were divided into two groups. Group A (n=30) included patients in whom acute appendicitis was diagnosed with clinical parameters (anamnestic, clinical signs, leucocyte count and CRP) and group B (n=30) included patients in whom diagnosis was estimated with clinical parameters plus echotomographic confirmation. In both groups, we analyzed the demographic data and the intraoperative findings of the appendix (catarrhal, phlegmonous, empyemetic, gangrenous without perforation and with perforation) in correlation to the diagnostic method.

Results: Demographic data between the groups was homogenous. Mean age (10.5+2.8sd vs 9.2+2.8sd, BMI (20.4+4.4sd vs 19.28+5.3sd) and male to female ratio (56,6%:43.3% vs 63.3%: 36.7%) were not significantly different. In most of the patients phlegmonous appendix was the common intraoperative finding (41pts vs 25 pts) in respect to the groups. In group B not significantly, higher number of patients had empyemetic (15% vs 6.6%), gangrenous without perforation (18.3% vs 10%) and with perforation (20% vs 10%). According to Fisher-Freeman-Halton exact test no significant association was found between the groups and the intraoperative findings for (p=0,0546).

Conclusion: Preoperative diagnoses, clinical with or without echotomographic confirmation does not associate and correlate to the intraoperative findings in acute appendicitis

Inguinal hernia repair in children, evaluation of efficiency of different local anesthetic regimens for caudal block

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Abstract

Background: Caudal block as a routine procedure in pediatric lower abdomen surgery has been widely used and established. Besides this, some controversies about the potential risks of different local anesthetic toxicity, and safety in terms of combinations, doses and concentrations are still discussed. The aim of this study was to evaluate the efficacy and safety of three different local anesthetic concentrations used for caudal block in pediatric inguinal hernia repair.

Method: In prospective clinical study 60 children (after informed consent), ASA I, weighted 10-20 kg, scheduled for inguinal repair were randomly divided in 3 groups according to the local anesthetic given for caudal anesthesia. In Group R (n=20) received 0,2% Ropivacaine, group M (n=20) received 0,5% Mepivacaine and group B (n=20) received 0,125% of Bupivacaine. In all groups, caudal anesthesia was given with the doses of 1ml/kg and all patients underwent additional anesthesia with laryngeal mask, maintained with sevoflurane, nitrous oxide and oxygen. In all groups, we evaluated the need for additional analgesia with opioids, the differences of maintaining concentrations of sevoflurane, the complications, the type and time from emergency anesthesia and the need for postoperative anesthesia.

Results: In all groups, demographic data were homogenic. Among the three groups there was no significant difference found in the maintaining concentrations of sevoflurane (1.13±0.39%; 1.1±0.45% and 1.14 ±0.51%). In all groups additional opioid (fentanyl) was given in one child. Postoperative analgesia regimen in all groups was not significantly different. Perioperative and postoperative complications in all groups were not registered.

Conclusion: In conclusion, different local anesthetics used for caudal anesthesia are safe and suitable for analgesia in children weighed 10-20 kg undergoing inguinal repair.

Insulin resistance in orthopedic surgical patients and its effect on orthopedic teenage patients-review of literature
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Abstract

During orthopedic surgery stress response involves different degree of metabolic and hormonal changes that directly influence glucose metabolism, occurrence of hyperglycemia decreased glucose utilization and lead to insulin resistance. Teenage patients are more prone to acute stress response due to their activated hormonal axis fluctuations. Furthermore, as novel data report, unchanged glucose metabolism is the key feature for better orthopedic surgery outcome. The aim of this article is to give a review of the basic cell functioning during surgery where glucose and insulin levels are changed in correspondence to disbalance of hormones after orthopedic surgery.

From orthopedic point of view when insulin resistance is present glucose uptake, muscular function, muscle strength and lean body mass are decrease a contrary to increased protein catabolism (again affecting the skeleton muscles). Literature reveals that this features are incorporated in disturbed cell functions. Glucose is a substrate for chondrocytes, a source for glucosamine sulfate and metalloproteinase functioning while insulin stimulates matrix synthesis, takes role in replacing lost and damaged cartilage and improves osteoblast functioning. Therefore, every time when misbalance between glucose and insulin occurs cartilage formation, bone remodeling and bone formation is affected. Furthermore hormonal changes in teenagers pronounce the changes so better outcome is under question.

As clinicians we are fixated on clinical features often forgetting the basic metabolic influences of key hormonal changes in orthopedic patients. Sometimes all "normal" clinical or non-clinical signs of hormonal disbalance may lead to more specific complications and increase morbidity in teenage patients.