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THE ROADMAP FOR URGENT PEDIATRIC CERVICAL SPINE CONDITIONS

Introduction

Pediatric cervical spine urgent conditions is a big group of heterogenic conditions. Some of them are really dangerous for life and health (trauma, neurological manifestation of congenital abnormality, septic conditions, etc.). Others are absolutely benign and self-solving such as pediatric acute wryneck and juvenile disk calcification. Unfortunately most of this conditions are very uncommon and often have very similar symptoms. The aim of our work was to create easy-to-use protocol for managing children with urgent cervical spine conditions.

Material and methods

A 15 years of experience and scientific research in treating of 420 children (6 month to 18 years old) is presented. To understand the etiology of the majority of benign non-traumatic child's acute torticollis we used MRI and CT in the first 12 hours after the onset of this condition. Children with atlanto-axial rotatory fixation were treated with traction or open reduction and fixation. Patients with trauma and unstable malformations were treated using anterior, posterior or combined approaches with different instrumentation.

Results

We introduced and began to use the roadmap for pediatric cervical spine urgent conditions in our daily practice. It is based on the division of patient's stream in 3 subgroups or «danger levels». This scheme became a very simple instrument for practitioners to avoid typical medical mistakes. By the way we found new MRI and CT features of acute wryneck. On the base of these findings we proposed a new theory of this condition pathogenesis.

Discussion

The pediatric cervical urgent conditions are uncommon and challenging. There are few publications in this field. Some papers demonstrate potential or real risk of death in this group of patients.

Conclusion

Every practitioner has a chance to face with urgent pediatric cervical spine conditions. Great attention and caution are strictly required in children with complex congenital abnormalities and genetic disorders. Knowledge of special pediatric cervical spine features and use of the urgent cervical spine conditions roadmap is the way to decrease medical mistakes. A multi professional team to deal with most complex pediatric cervical spine conditions is very important.