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Long-term results of surgical treatment the cervicothoracic dislocation due to congenital and bone-dysplasia-related vertebral malformations in children.

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Background: Cervicothoracic dislocations (CTD) in children are a rare and challenging pathology. The dislocations are also known as spondyloptosis, segmental spinal dysgenesis, and severe kyphotic deformity. According to the literature, there are no uniform approaches to the treatment tactics of this pathology.

Research question: to evaluate the long-term results of surgical treatment the CTD in children.

Design: retrospective cohort case-control study.

Methods: we analyzed the results of surgical treatment of the six patients with CTD detected in children with vertebral anomalies and bone dysplasia. The main evaluation criteria here were the age; gender, spinal cord width at dislocation level and neurological status, clinical symptoms, preop and postop mJOA and VAS), type of treatment; complications and follow-up more than 2 years.

Results: four patients had the Klippel-Feil syndrome, one - VATER syndrome and one - neurofibromatosis. In five patients, the symptoms developed slowly during the first year of life, in one case the disease manifested itself at the age of 3,5 years with progressive deformity and then paresis. Two types of surgical approaches were used: posterior instrumental fixation with vertebrectomy from the posterior approach (4 procedures) and combined two-stage surgeries from the anterior and posterior approaches (2 procedures). If to compare the types by the number of complications, several times more complications have been found after posterior instrumented fusion and posterior vertebrectomy (8 complications per 6 patients). Their treatment was long-term, multi-stage and was accompanied by reoperations and neurological complications.

Discussion: Congenital and bone-dysplasia-related CTD are an extremely rare pathology that manifests itself in early age and requires an early surgical treatment. The surgical tactic for such patients is determined individually. Early multi-stage combined treatment has been the best option available so far.

Fig. 1

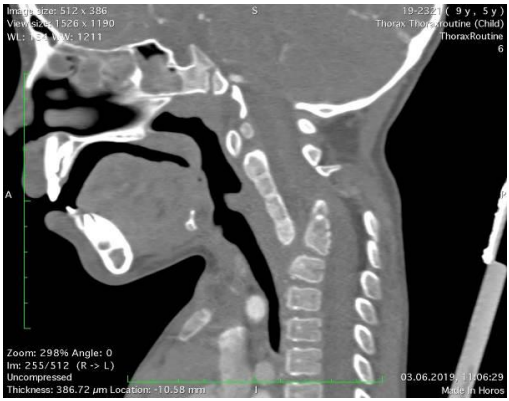


Fig. 2

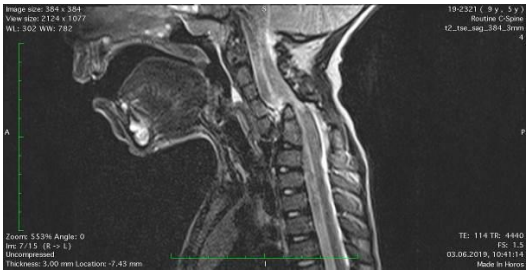
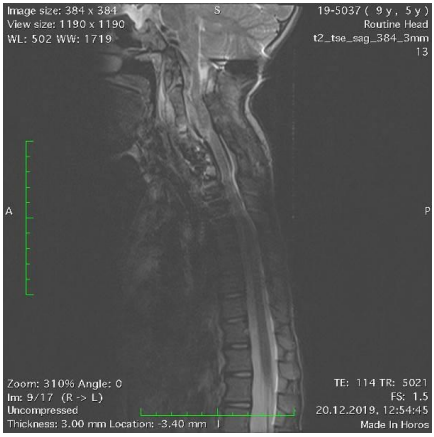


Fig. 3



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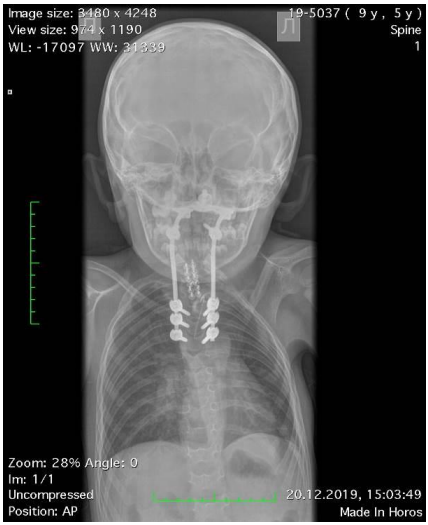
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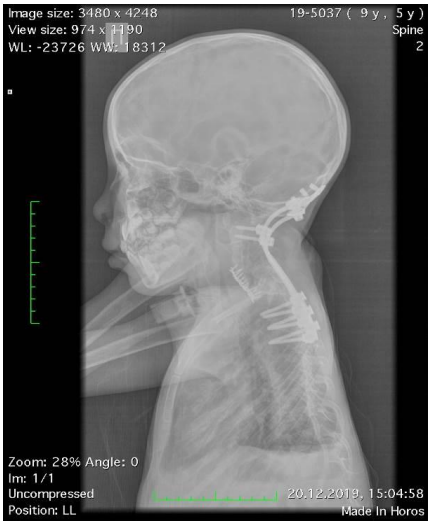
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