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Title of Abstract Osteopathic Approach to Treatment of Developmental Hip Dysplasia in Infants

Text of ABSTRACT

Developmental hip dysplasia (DHD) is the most frequent locomotive apparatus pathology in infants of the first year of life. Unfortunately existing methods of orthopedic examination and care cannot guarantee success in 100% of cases, which may have a negative influence over the gait, distribution of force lines in the body and general posture.

The objective of the study: to evaluate the possibilities of osteopathic approach to DHD treatment.

Material and methods. The study was based upon the analysis of 195 infants (age 0–8 months) with diagnosed DHD; 122 of them were treated osteopathically (main group) and 73 orthopedically (reference group).

Methods: orthopedic and osteopathic examination, ultrasound diagnosis (USD), statistical (χ^2 with Yates correction).

Results. Three DHD types were differentiated: primary, secondary and mixed. The *primary type* (38.5%) was present before birth, being characterized by marked osteopathic dysfunction of the innominate bones, sacrum, coccyx, including their intra-osseous strains, as well as of the hip joint/joints. The *secondary type* (15.6%) developed during the first weeks of life, and was caused by fascial tensions coming from abdominal viscera, diaphragm, etc., by non-physiological SBS strains, spinal column dysfunctions, etc. In cases of *mixed DHD type* the latter overlaid the former.

Basing on the results of osteopathic examination five palpatory patterns characterizing hip joint peculiarities and body involvement were differentiated: frontal-horizontal (45.9%), unilateral frontal (24.6%), bilateral frontal (5.7%), torsion (8.2%), and a combination of pelvic lesions with lateral SBS strain (15.6%).

Each patient in the main group received 6–8 treatments (10–21 days apart). The strategy depended upon DHD type and the found pattern. In *the primary type* the main target was the pelvis. In *the secondary type* treatment started with the place of origin of the pattern causing DHD. In *the mixed type* both approaches were combined. Treatment was considered completed after normalization of osteopathic signs (absence of tensions, restitution of symmetric motility and mobility of all structures involved in the existing pattern, unhindered PRM distribution in the body) and of USD picture.

Comparison with the reference group showed that although USD findings demonstrated joint restitution at one and the same time, the possibility of incomplete resolution of dysfunctions with orthopedic treatment was significantly higher ($P < 0.05$) than with the osteopathic approach.

The following main mechanisms of positive influence of osteopathic treatment over the dysplastic hip joint is suggested:

- tension resolution favors body organization along the midline and normalization of spatial relationship in the affected joint;
- using PRM, resolving intra-osseous strains in the pelvis, femur, cranium it improves blood supply and innervation of the developing joint with positive influence over its further formation.

Conclusion. Although normalization of ultrasound picture happened at the same time in both groups, osteopathic treatment may be considered complete and pathogenetically based. It leads to symmetrical development of the whole pelvic girdle and hip joints, which favorably influences locomotion and general body posture.

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