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Minimal Brain Dysfunctions” in children and following deformities of feet, knees, hips, pelvis and spine as the common problem in children in many countries

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Introduction.: In Poland almost 7 % of the population of children and youth are born with various changes in the central nerve system (CNS). The status of such cases we described as Minimal Brain Dysfunction (MBD). Consequently, secondary changes of the locomotors system can be observed.

Material: This article provides observations from the years 1995 – 2017. The material consists of (N) - 985 children and youths aged from 2 to 18. The result of MBD can be: valgus deformity of the feet, hyperextension / recurvation of the knees, anterior tilt of the pelvis and hyperlordosis of the lumbar spine. The described deformity is very common among Polish children, even 7 % to 11%.

Valgus or plane valgus deformity of the feet: The mechanism of such deformity is following: 1/ while walking we need in every step the dorsal flexion of the feet, 2/ in the cases of MBD persist the shortening of the Achilles tendon and m. Triceps surae, 3/ in cases of coexisted laxity of joints the required dorsal flexion is made in prone position of the feet, by every step, 4/ such repeated “dorsal flexion in prone position” after some years give “full fixed valgus, or “plane - valgus deformity” of the feet.

Recurvation and valgus deformity of the knees: Recurvation of the knees is very often accompanied by valgus deformity of the feet. Such deformity of the knees is the effect of a shortening of the Achilles tendon and m. Triceps surae. In lecture authors explain these connections. The recurvation of the knee is the compensatory deformation. Children with MBD, because of laxity of joints very frequently has the manner to sit in TV position (legs apart on back). In result the valgus deformity of knees fixed.

Anterior tilt of the pelvis and hyperlordosis of the lumbar spine: In children with MBD, additionally there's very often anterior tilt of the pelvis. Spasticity or sub spasticity is typical for the m. Rectus, one part of the m. Quadriceps. Because of anterior tilt of pelvis – in result – is the hyperlordosis of lumbar spine. We observe this deformity of the pelvis in 11% of people in Poland. Because of this deformity adults people has very frequent “low back pain syndrome”.

Conclusions: 1/ In Poland from 7 % to 11 % of children and youth have the symptoms of Minimal Brain Dysfunctions (MBD). 2/ In result of MBD there is shortening of tendons and muscles and if contemporary exist laxity of joints can develop feet valgus or plano – valgus deformity, recurvation of knees, anterior tilt of pelvis with hyperlordosis of lumbar spine.

3/ Early treatment of all above mentioned deformities in childhood is the best prophylactics for feet, knees, hips and spine in adults. In the treatment the best method are stretching exercises. Only 5 % of small patients need surgery.

Literature: www.ortopedia.karski.lublin.pl .

Biography

Dr Jacek Karski is working as an eminent Faculty member at Department of Medical University in Lublin , Former Head of Paediatric Orthopaedics and Rehabilitation, Poland. He has published numerous research papers and articles in reputed journals and has various other achievements in the related studies. He has extended her valuable service towards the scientific community with his extensive research work.

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