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Meeting Abstract

Patterns of back pain in patients with developmental dysplastic hip

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Text

Objectives: A disorder called hip-spine syndrome is widespread in patients with hip arthritis. Developmental dysplastic hip (DDH) is known to be the disease developing in young age. Thus, we can wait for early manifestation of back pain in those patients. Performance of total hip arthroplasty (THA) changes biomechanics of suffering hip and creates new conditions for functioning of the spine.

The aim of the study was to investigate patterns of back pain in patients with DDH before and after THA.

Methods: We studied 66 patients with DDH which needed for THA. 33 of them had unilateral hip lesion and in 33 patients both hips were affected. In the second group 17 patients had been operated on both sides, in 6 patients the second hip joint was operated and in 10 patients only 1 hip joint was replaced. All patients were clinically examined and asked about duration and time of onset the pain syndrome in hips and back. The intensity of back pain was estimated with visual analogue scale (VAS) before THA and 1 year later. The statistical analysis included the analysis of variances and nonparametric correlation.

Results and conclusion: Before THA all patient had pain in the spine, mostly low back pain. 29 patients reported about appearance of back pain earlier than one in the hips. They were treated unsuccessfully by neurologists during about 3-10 years before correct diagnosis had been established. 3 main localizations of back pain were found: the center of lumbar region (89.4%), places of posterior superior iliac spines (80.3%) and the scoliotic deformation arc in thoracic spine (16.7%). The intensity of back pain was from 2 to 6 VAS points: for unilateral DDH - 3.4 ± 2.7 points, for bilateral DDH - 4.3 ± 2.4 points.

After THA 45.5% of all patients (72.7% of patients with unilateral DDH) didn't have complaints on back pain. We found significant correlations between presence of pain and quantity of affected and replaced hip joints, leg length discrepancy and limp. The lowest VAS mean had patients with unilateral DDH (1.1 ± 0.8 points) and the highest one had patients with bilateral DDH and unilateral THA (2.7 ± 1.6). In our opinion the main cause of that was persisting leg length discrepancy leading to the pelvic distortion and limp due to pain in non-operated hip. Patients complained of back pain localized in the center of lumbar region

(31.8%), limping patients also complained of pain in places of posterior superior iliac spines (27.3%). Presence of limp had significant correlation with retention of back pain after THA. One patient (1.5%) with bilateral DDH needed for surgical stabilization of lumbar spine after bilateral THA.

Degenerative lesions of spine are certain to have been found in patients with DDH. Bilateral suffering leads to higher intensity of pain before and after THA. Also patients with bilateral DDH need for replacement of both hips to provide the best conditions for compensation of spine. After first THA they have to use shortening compensator to prevent pelvic distortion.