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2-year follow-up after arthroscopic treatment of femoro-acetabular impingement (FAI)

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Background:

Hip arthroscopy gained ground in recent years compared to open procedures in the treatment of femoro-acetabular impingement (FAI).

Question/purposes:

The aim of this prospective single center study was to investigate the clinical outcome of patients after arthroscopic treatment of ventrolateral cam-impingement in a follow-up period of two years.

Patients/methods:

Between 12/2008 and 12/2009 36 patients (f: 16, m: 20) with ventrolateral cam-impingement underwent resection of the deformity at the head-neck junction. The patients were checked preoperatively and 6 weeks (6w), 3 months (3m), 6 months (6m), 1 year (1y) and 2 years (2y) postoperatively. The results were recorded using the following scores: Harris Hip Score (HHS) (min = 0, max = 100), WOMAC score (min=0, max=100%) and Nonarthritic Hip Score (NAHS) (min = 0, max = 100). Pain and function were evaluated by the Numeric Rating Scale (NRS) (min=0, max=10). The average age of the patients was 41.4 years (17-62 years). Statistical analysis was performed by SPSS version 15.0 (SPSS, Chicago, Ill.). The significance level was set at $p < 0.05$.

Results:

In HHS the average level increased from 66.1 points preoperatively to 83.1 points postoperatively. The WOMAC score showed the following values: 65.6% preoperatively, 80.3% postoperatively. The NAHS increased from an average of 60.3 points preoperatively to 77.0 points 2 years after arthroscopic treatment. In NRS the average level in terms of pain decreased from 5.1 points to 3.0 points postoperatively. NRS for function increased from an average level of 5.3 to 7.0 after the operation. A transient hypesthesia in the distribution of the lateral femoral cutaneous nerve was documented in three cases. Infection, avascular necrosis, vascular injury or thrombosis were not observed.

Conclusion:

The clinical findings after arthroscopic treatment of femoro-acetabular cam-impingement show a statistically significant improvement within 3 months following the operation. The results stay on a high level in a 2-year follow-up. Arthroscopic treatment is a safe and reproducible method for the treatment of femoro-acetabular impingement (FAI) in terms of scores, improvement of function and relief of pain. The study has been supported by Deutsche Arthrose-Hilfe and will be continued to evaluate the long-term results.