

EVALUATION OF KNEE FUNCTIONAL STATUS AND PAIN AFTER MINIMALLY INVASIVE SURGICAL TREATMENT OF PATELLOFEMORAL ARTHRITIS USING WOMAC SCORE (QUESTIONNAIRE)

K. Akilzhanov^{1,2}

¹State Medical University (Semey, Kazakhstan)

²City Hospital №1 (Pavlodar, Kazakhstan)

a_kenes79@mail.ru

Key words: Patellofemoral arthritis, Patellofemoral pain syndrome, WOMAC, Noninvasive surgical treatment, Arthroscopy

Patellofemoral osteoarthritis in the healthy middle-aged population is a challenging problem. Patellofemoral arthritis/ arthrosis (PA) refers to the presence of degenerative changes under the kneecap (patella) with variable manifestations from the symptoms of pain in the anterior part of the knee to serious difficulties with climbing and movement along the stairs. WOMAC index or Western Ontario and McMaster Universities Osteoarthritic Index (WOMAC) is used to assess the course of disease or response to treatment in patients with knee or hip osteoarthritis. Initially developed in 1982, the WOMAC has undergone multiple revisions. WOMAC measures of three subscales on a scale of 0-4. [None - 0, Mild - 1, Moderate - 2, Severe - 3, Extreme - 4]. It measures total of 24 items and offers 5 responses for each item measured. Recall period for items is 48 hours. Three subscales are 1) Pain severity during various positions or movements, 5 items; 2) Severity of joint stiffness, 2 items; 3) Difficulty performing daily functional activities, 17 items. WOMAC can be considered to have face and content validity. It also appears to be responsive to change following surgical and nonsurgical interventions for knee OA and chondral defects.

Objective: To evaluate outcomes of application of newly developed method of minimally invasive surgical treatment of PA using WOMAC score (questionnaire).

Materials and methods: We have developed a new method for minimally invasive surgical treatment of PA using arthroscopic instrumentation. The knee pain and functional status were evaluated by WOMAC scales. WOMAC consists of a questionnaire which is aimed to assess three items - pain, joint stiffness and difficulty in physical activity. Higher scores on the WOMAC indicate worse pain, stiffness, and functional limitations.

Results. This is a prospective study of 14 consecutive knees in 14 patients who were treated by our developed noninvasive surgical method. The minimum follow up was 3 months (mean 10.2 months; range, 3-18 months). Preoperative radiographs showed IWANO stage 2 and 3 (patellofemoral joint space narrowing and degenerative changes). The mean age of the patients was 60.1 years (range, 46-81 years). The subjective outcome was based on the WOMAC score. According to the WOMAC score, the scores improved considerably by 2.34 points with respect to pain and by 1.63 points with respect to function 3 month after surgical treatment. The majority of patients experienced improvement in their patellofemoral symptoms. However, the clinical outcome was better in comparison to other surgical procedures. After the short follow up, our method of minimally invasive surgical treatment of the patellofemoral arthritis would be recommended to larger number of patients.