

## Post-isometric Relaxation in Rehabilitation of Patients with Late-stage Coxarthrosis

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### Abstract

End-stage coxarthrosis is a hip joint disease which creates severe pain and movement constraints. To analyze the effectiveness of the inclusion of post-isometric relaxation in conservative treatment 34 patients with stage III coxarthrosis were examined. The study used: BAIII, algofunctional Leken index, Harris test, McGill and WOMAC questionnaires. The inclusion of post-isometric relaxation techniques reduce pain syndrome (2.5 times) and improve (2.1 times) the functional activity of the joint.

Coxarthrosis occupies the second place after gonarthrosis in incidence and the first place of persistent disability. The share of invalids due to coxarthrosis of genesis makes up of those who are unable to work from joint diseases. Coxarthrosis usually elderly people and most cases progress steadily. Patients from coxarthrosis experience severe pain in the hip joints, reduction functional capacity and social isolation. Treatment of such patients is an actual problem of rheumatology, traumatology, and orthopedics. The urgency of treatment of these diseases is determined by its high social, since in the last decade the indicator of disability of the population due to arthrosis, has been increased. The replacement of the hip joint is a serious surgical intervention but has a number of contraindications. Which, could create a pronounced pain syndrome. Thus, the problem of conservative treatment of coxarthrosis is still topical. Modern medicine has a large arsenal of funds aimed at treating patients with osteoarthritis. The leading method is a complex of conservative therapies, which includes medical therapy, physiotherapy, exercise therapy, massage, and Post-Isometric Relaxation Techniques (PIRT). The aim of this work is to evaluate the effectiveness of PIRT in the treatment of patients with stage III coxarthrosis.

The affected both periarticular muscles of the

hip joint, and, if necessary, on the sacroiliac joint and the lumbar spine. With the limitation of lead in the hip joint, the admission with the effect on the muscles leading to the hip was performed. With the restriction of the hip reduction, a procedure was performed with an effect on the group of muscles of the hip femora. With the restriction of the external rotation of the thigh, the admission was made to the muscles that perform the internal rotation of the thigh, and when the internal rotation is limited, the muscles of the thigh are guided from the outside. When working with the hip joint, special attention was paid to the ilio-lumbar and gluteus muscles, the quadriceps femoris, the biceps femoris, the semitendinous and semimembranous muscles of the femur, pear-shaped and the muscles of the posterior surface of the tibia. PIRT was performed on these muscles.

Thus, the presented combination of medical treatment with physiotherapeutic procedures, exercise therapy with exercises of gravitational weighting and massage with ischemic compression of trigger points is characterized by high eliminating the main clinical manifestations of coxarthrosis.

Inclusion of the methods of PIRT greatly enhances the obtained positive effect of treatment. Repeated implementation of the proposed rehabilitation course will improve the quality of life of patients and maximally postpone the period of arthroplasty.

**Keywords:** Coxarthrosis; Post-isometric; Rehabilitation