

# **Radiation-modifying effect of Hyperbaric Oxygen Therapy in complex treatment of patients with rheumatoid arthritis and osteoarthritis**

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## **AIM:**

To evaluate the efficiency of radiotherapy (RT) in combination with HBOT versus PT used in the complex therapy for rheumatoid arthritis (RA) and osteoarthritis (OA).

## **MATERIALS AND METHODS:**

46 patients with RA and 18 patients with OA were examined, of them 24 patients with RA and 10 with OA received complex therapy involving a course of HBOT. The groups of patients had no statistically significant differences in the characteristics of their disease and in the nature of the therapy performed. All the patients received RT as radiation therapy.

The patients were followed up for 2 years by assessing basic clinical (the Richi articular index, total pain index, local articular index, pain index for knee and hand joints, circumference of knee and wrist joints) and ultrasound (the magnitude of exudate, an erosive process, osteophytes, articular fissure stenosis, the thickness of the synovial membrane and cartilage) indices.

## **RESULTS:**

Use of HBOT in patients with RA and OA just before articular radiation therapy brought about a more pronounced positive effect of complex therapy. In addition to significant positive changes in clinical parameters, there was a slow progression of a pathological process, as evidenced by ultrasound study.

## **CONCLUSION:**

By reducing needs for drug therapy, for nonsteroidal anti-inflammatory drugs in particular, HBOT produces a pharmacoeconomic effect.