Abstract:
Radiofrequency neurolysis of lumbar medial branch is currently the only proven way to treat patients with chronic lumbar zygapophysial joint pain, however, in some patients it can cause transient postoperative pain due to an inflammation caused by trauma of the electrode insertion and the thermal lesion around the target nerves. The aim of this study was to assess the effectiveness of intraoperative injection of methylprednisolone or pentoxifylline in comparison with placebo (saline) to prevent this process. 45 consecutive patients seen by one physician at one pain management clinic were included. Patients were randomly assigned to 3 groups of 15 patients treated with radiofrequency neurotomy procedure with an addition of methylprednisolone, pentoxifylline or saline, respectively, and were observed for 6 months. Pain intensity, summed pain intensity difference, minimum 50% reduction of pain intensity, Patients Satisfaction Score, and local tenderness were determined. The 50% reduction of pain intensity was achieved in 80% of patients one week after the procedure, and at 6 months such results were reported by 60% of patients. There was a significant reduction of pain intensity in all three groups at all time points compared to baseline, however, there were no differences between the three groups. There was a significant difference in local tenderness as a measure of postoperative pain indicating effectiveness of both, methylprednisolone and pentoxifylline. No other complications were noted in any of the patients. Radiofrequency neurotomy is a safe and effective method to treat patients with zygapophysial joint pain. An addition of pentoxifylline and methylprednisolone can reduce postoperative pain commonly appearing within a short time after the procedure, however, neither pentoxifylline nor methylprednisolone influences long-term follow-up results.

Key words:
zygapophysial joints, chronic pain, radiofrequency, methylprednisolone, pentoxifylline