

Effectiveness of platelet-rich plasma in osteoarthritis of The knee joint

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Abstrak

Background: Platelet-Rich Plasma is believed to repair cartilage degeneration by stimulating tissue regeneration, however the clinical evidence is still insufficient. The aim of this research is to compare the efficacy of intra-articular hyaluronic acid injection (HA) and combined hyaluronic acid and platelet-rich plasma (HA-PRP) on osteoarthritis of the knee, and the association on gender, age, body mass index and osteoarthritis degree towards the efficacy. Methods: This is a cross-sectional study using 58 patients' medical records. 27 patients received HA injections, and 31 patients received HA-PRP injections. Patients were evaluated weekly using IKDC and WOMAC score until 2 months after the injections. Results: On the 2nd month of follow up, AH-PRP shows greater increase in IKDC ($p=0,146$) and WOMAC (Pain $p=0,004$; Stiffness $p=0,008$; Knee function $p=0,007$) score compared to HA injection. There's no association on gender, age, and body mass index towards the IKDC and WOMAC score increase on either HA or combined HA-PRP injection. There's no significant difference on osteoarthritis degree towards IKDC and WOMAC score increase on HA injection. However, there's a significant difference between osteoarthritis degree 2 and 4 towards IKDC ($p=0,002$) and WOMAC score (Pain $p=0,042$; Stiffness $p=0,018$; Knee function $p=0,042$) and between osteoarthritis degree 2 and 3 towards WOMAC Pain ($p=0,008$) and WOMAC Knee function ($p=0,018$). Conclusions: HA-PRP injection shows better results to reduce osteoarthritis symptoms compared to HA injections. Better results were observed in patients with less severe osteoarthritis degree.