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Comparative study between clinical outcomes of patients with osteoarthritis of knee treated by intra-articular injections of platelet rich plasma and high molecular weight hyaluronic acid

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Introduction & aim: Osteoarthritis (OA) is the most prevalent form of arthritis in the world. OA incidence increases steadily with age, affecting 12.1% of the population from 25 to 74 years old, and it is the leading cause of physical disability in people older than 65 years. The primary objective of this study was to assess and compare the Clinical Outcomes of Patients with Primary Osteoarthritis of Knee receiving Intra-articular injections of Platelet Rich Plasma and High Molecular Weight Hyaluronic Acid

Materials and Methods: 44 Patients with primary OA of knee, were divided into two groups of 22 each. Group A was administered intra-articular injections of PRP (prepared using single spin technique) and Group B was administered intra-articular injections of Hyaluronic Acid. The functional outcome was assessed before administration of injection and at 6 months follow-up using subjective questionnaire scoring systems i.e. WOMAC, IKDC and VAS indices.

Results: Out of 44 patients, 33 were females, and 11 males. The average age in Group A was 51.55 ± 6.93 years and 53.27 ± 7.73 years in Group B. 68.2% of patients in the study had bilateral affection. The Improvement in functional outcome scores in Group A (WOMAC=12.980, $P < 0.001$; IKDC=11.680, $P < 0.001$; VAS=2.773, $P < 0.001$) were significantly better than that of Group B (WOMAC= 6.685, $P < 0.001$; IKDC=8.501, $P < 0.001$; VAS= 1.773, $P < 0.001$)

Discussion & Conclusion: The results obtained in our study compare well with other studies undertaken in the past. Patients of both groups showed statistically significant improvement in functional outcome at 6months follow-up. The functional outcome of patients receiving Platelet Rich Plasma was significantly better than those receiving Hyaluronic Acid. Therefore, intra-articular PRP is superior to HA in alleviating symptoms and improving short term outcome of early OA Knee and can be considered a safe, simple and efficacious option over that of Hyaluronic Acid.



Biography

Navneeth Kumar G.K has completed his post-graduation in MS Orthopaedics, from the prestigious Bangalore Medical College and Research Institute, India under the guidance and mentorship of Dr. Purushotham V.J (Professor and Unit Chief) in BMCRI. Due to his fond interest in arthroplasty, he pursued his fellowship in arthroplasty at Sparsh Hospital Bangalore, under the esteemed guidance of Dr. Sharan Shivraj Patil. This study on the efficacy of PRP vs HA injections in OA knee was undertaken to primarily explore the non-operative solutions in the management of early antero-medial osteoarthritis of knee, which is a rising health problem in a developing country like India. The results of the study attempt to establish a protocol for intra-articular injections in OA knee

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