

The Effect of Platelet Enriched Plasma on Clinical Outcomes in Patients with Femoroacetabular Impingement Following Arthroscopic Labral Repair and Femoral Neck Osteoplasty

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Summary:

To compare the clinical outcome of patients treated with and without Platelet-Rich Plasma (PRP) injection while undergoing arthroscopic labral repair and femoral neck osteoplasty for femoral acetabular impingement (FAI).

Abstract:

PURPOSE

To compare the clinical outcome of patients treated with and without Platelet-Rich Plasma (PRP) injection while undergoing arthroscopic labral repair and femoral neck osteoplasty for femoral acetabular impingement (FAI).

METHODS

Patients were randomized at the time of surgery to receive either an intra-articular injection of 5 cc of PRP prepared with the Accelerate Concentrating System, (Exactech Biologics; Gainesville, FL) or an equal volume of 0.9% normal saline. All patients underwent arthroscopic labral repair and osteoplasty of the femoral neck and received the injection at the conclusion of the procedure. One week following surgery, patients were seen in follow-up where thigh circumference (measured 10 cm distal to the tip of the greater trochanter) and the presence of ecchymosis of the thigh were recorded. Clinical outcome scores were collected prior to surgery and at 1 month, 3 months, 6 months, and a minimum of 12 months post-operatively.

RESULTS

Thirty-five patients were enrolled into the current study, 20 patients received a PRP injection and 15 received a saline injection. There was no difference in any of the clinical outcome measures at any time point between the two groups. Thigh circumference was compared pre-operatively and 1 week post-operatively, there was no significant difference between the two groups. Ecchymosis was compared between the two groups at 1 week post-operatively and 4 of the 20 patients in the PRP group and 10 of the 15 in the placebo group had bruising on the lateral thigh. This was compared with a Chi Square test and found to be statistically significant with a p value of 0.005.

CONCLUSION

An intra-articular injection of PRP after labral repair did not improve the clinical outcome up to one year post-operatively in patients undergoing arthroscopic labral repair and osteoplasty of the femoral neck.