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Platelet-Rich Plasma as an Effective Treatment for Proximal Hamstring Injuries

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Summary:
A platelet-rich plasma (PRP) injection at the muscle origin is an effective treatment for proximal hamstrings injuries by effectively reducing pain and increasing functional outcomes scores in both primary and recalcitrant injuries.

Abstract:
Introduction:
Proximal hamstring injuries can be disabling, and several traditional conservative treatments (TCT), including physiotherapy and non-steroidal anti-inflammatory drugs, have been inconsistently successful. Corticosteroid injections have demonstrated success, but can exhibit adverse effects on local tissue. Open repair has shown good to excellent results, but carries inherent surgical risk. Platelet-rich plasma (PRP) has emerged as a safe, effective treatment for several orthopaedic pathologies. We propose a PRP injection at the muscle origin as a novel treatment for proximal hamstring injuries.

Materials and Methods:
An Institutional Review Board approved retrospective review yielded fifteen patients with seventeen proximal hamstring injuries. Twelve injuries failed TCT initially and were ultimately treated with a PRP injection at the hamstrings origin. Five patients were successfully treated with TCT alone. Analysis included pre- and post-treatment visual analog scores (VAS), Nirschl Phase Rating Scale (NPRS), and return to sport.

Results:
There was no significant difference between the groups' pre-treatment VAS (p=0.17) and NPRS (p=0.06) nor their post-treatment VAS (p=0.40) and NPRS (p=0.21). Both the TCT (p=0.01, p=0.01) and the PRP (p=<0.01, p=<0.01) groups demonstrated significant reduction in VAS and NPRS. All athletes returned to desired activity level without major complications.

Conclusion and Discussion:
Treatment for proximal hamstring injuries can be challenging, especially cases refractory to TCT. In these instances, surgical repair has been previously advocated. We feel that in both refractory and primary cases, PRP is a safe, effective treatment and a viable alternative to operative intervention. Both our groups had significant reductions in VAS and NPRS, and all our athletes returned to sport without complications.