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Management of scaphoid fractures with PRP

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Introduction: Scaphoid fractures are the most common fractures of the carpus, accounting for 80% of all carpal fractures and are frequently seen in young adults. While treating is difficult and challenging, non-treated scaphoid nonunion induces carpal misalignment, osteoarthritis and collapse of the carpal bones.

Materials and Methods: We present one such challenging case of scaphoid nonunion which was successfully treated with percutaneous screw fixation and Platelet Rich Plasma (PRP). 21 year male patient came to us with a history of fall 8 months ago leading to scaphoid fracture which was treated conservatively elsewhere with a scaphoid cast for one and half months and advised mobilization. On presentation, he complained of pain in the anatomic snuff box and tenderness was present on examination. CT and MRI showed a cyst and signs of nonunion. Percutaneous Herbert's screw was fixed with a dorsal approach, PRP infiltrated at the fracture site using a spinal needle

and cast applied for 2 months. A serial follow up with X-rays every 15 days showed a complete union of the fracture at the end of 2 months.

Conclusion: PRP is a treatment form stimulating natural healing steps through growth factors contained in the platelets and provides support for the connection of cells, reduces pain and has an anti-inflammatory and anti-bacterial effect. Obtaining PRP growth factor is a simple, cheap and easy method. Being autogenous, PRP is easy to prepare and has an excellent reliability profile and has opened the door to new treatment. Studies in literature have reported the use of PRP in the treatment of non-union although, use of PRP in traumatic nonunion fractures after failure of surgery have shown controversial results. This case report on the efficacy of PRP for the treatment of nonunion of scaphoid bone shows a complete revascularization with attachment of the fracture fragments leading to a total healing.

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