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Plantar Fasciitis: Steroid Injections vs. PRP injections

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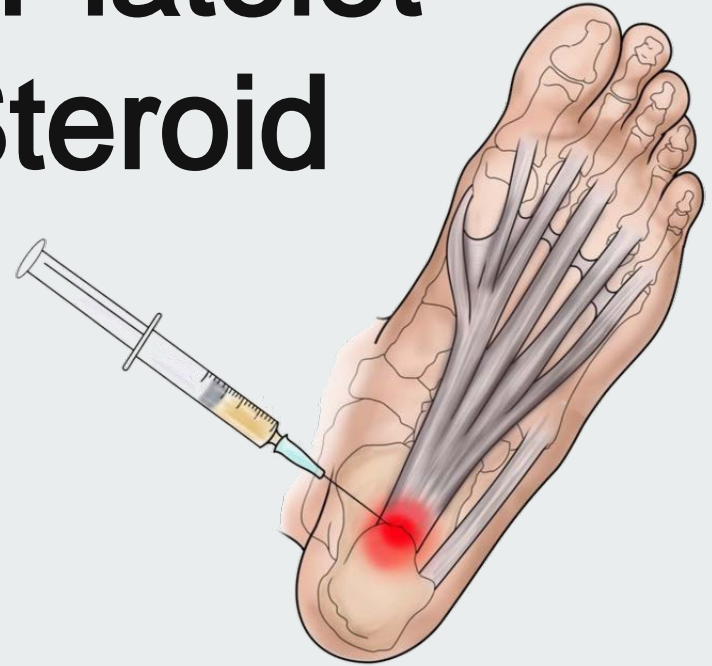
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Plantar Fasciitis: Platelet Rich Plasma or Steroid injections?



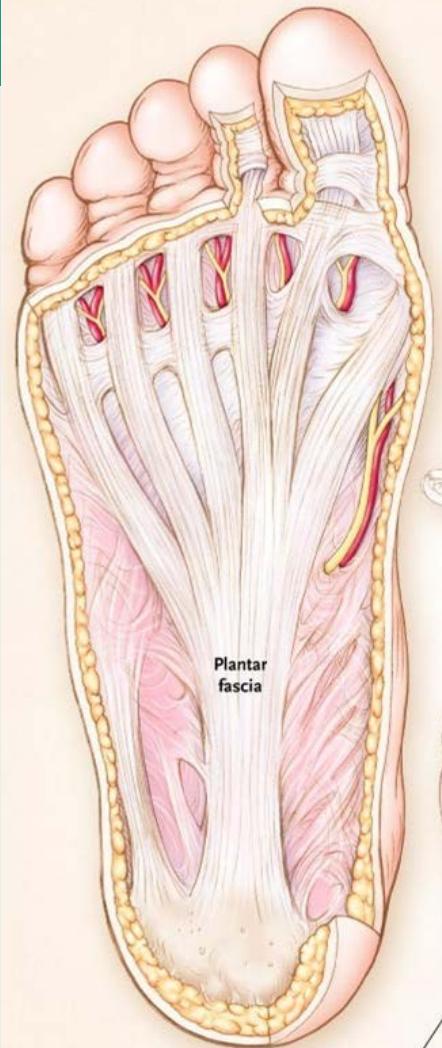
What do we want to know?



In patients with chronic plantar fasciitis, is a platelet-rich plasma injection or a corticosteroid injection more beneficial for long-term pain reduction?

What is the plantar fascia?

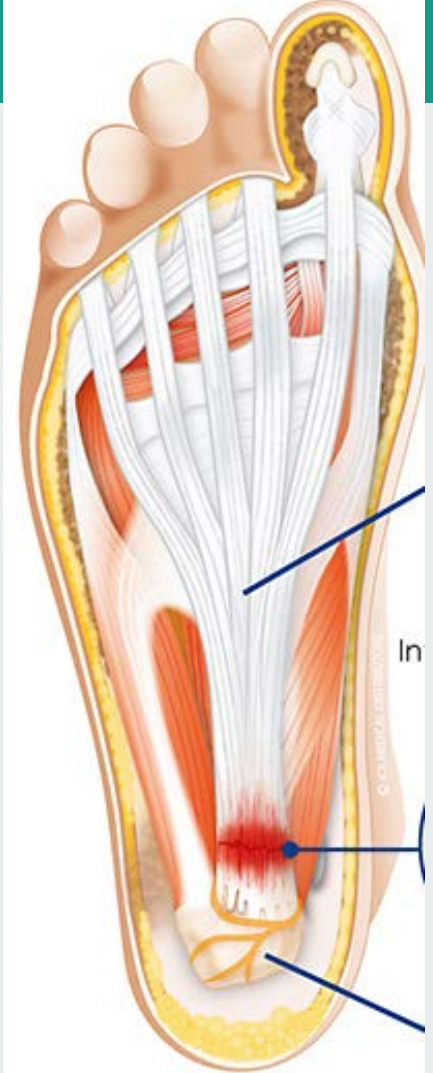
- Thick connective tissue
 - Originates at the calcaneus
 - Insertion: heads of the metatarsals or proximal phalanges
- Functions to provide support for the foot
- Absorbs part of the total load of the foot
- Assists with push off in walking
 - Windlass mechanism





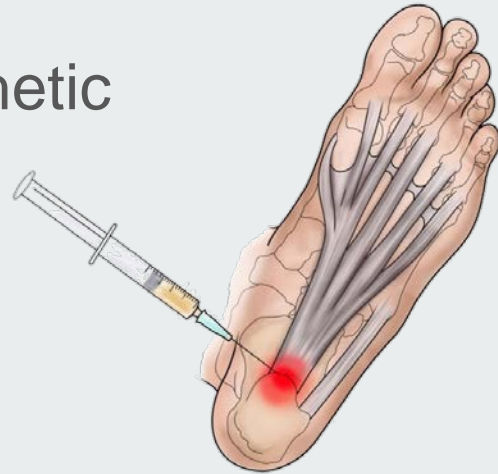
So what is plantar fasciitis?

- Inflammation of the plantar fascia in the arch of the foot
- Degeneration
 - Caused by microtears in the fascia that cannot heal



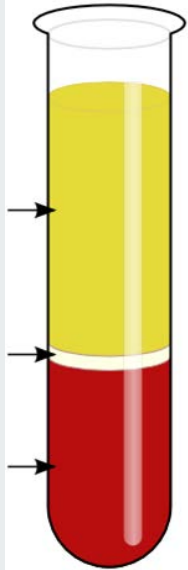
Steroid Injections

- Goal is to decrease inflammatory process
- Commonly used steroids
 - Prednisolone
 - Methylprednisolone
- May be administered with a local anesthetic
 - Lidocaine



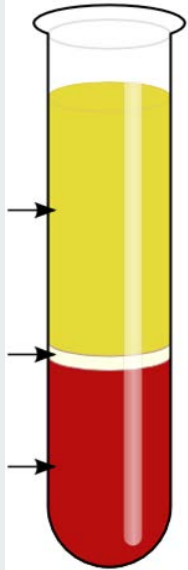
PRP injections

- Uses a sample of the patient's blood
- Centrifuge
 - Single or double spin method
- Injection delivers platelets and growth factors to injured area
 - Due to hypovascularization, these growth factors would never otherwise get to this area
- Activating agents
 - Calcium chloride or thrombin



PRP injections

- Cytokines from the platelets enhance fibroblast migration and proliferation, increase vascularization, and improve collagen deposition
- Also beneficial for other conditions
 - Lateral epicondylitis
 - Ligament sprain
 - Tendon injuries



Effectiveness and relevant factors of platelet -rich plasma treatment in managing plantar fasciitis: A systematic review

- All studies showed significant improvement with no side effects or complications when using PRP to treat patients with chronic PF
 - Comparison results
- PRP could be a safe and effective treatment for long term pain reduction in patients with chronic PF

Chronic plantar fasciitis: Effect of platelet -rich plasma, corticosteroid, and placebo

- Both steroid and PRP injections are effective treatments for chronic PF
- PRP is as effective or more effective than steroid injections at 3 months post-injection
- Limitations:
 - Small sample size
 - Need a longer follow-up window

Comparative study for the treatment of plantar fasciitis by corticosteroids versus platelet rich plasma.

- PRP injections are a successful and superior treatment to steroid injections for pain reduction in patients with chronic PF
- Limitations:
 - Small study size
 - Different administrators
 - Follow up was by phone, so some patients were noncompliant to the follow up
 - No placebo group

Plantar fasciitis: Outcome evaluation of plantar fasciitis treated with PRP against steroid injection.

- PRP showed none of the negative effects seen with corticosteroid injections
- PRP is a safe and efficient treatment for PF with no recurrence, side effects, or complications

What is the final conclusion?

- Short term, there is little to no difference between steroid injections and PRP injections
- Long term, PRP shows increased benefit for pain reduction in patients with chronic plantar fasciitis
 - PRP seems to be a safe treatment option with little to no side effects

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