Use of Platelet Rich Plasma for Achilles Tendinopathy
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Platelet Rich Plasma Treatment of Chronic Achilles Tendonosis

I. Background
   A. Chronic Achilles Tendonosis
      1. Common cause of heel pain
      2. Etiology involves micro-tears, poor collagen turnover, autophagy, and chaotic vascularity
      3. Diagnosis by clinical exam, ultrasound, and MRI
      4. Traditional treatment yields 85% clinical success (rest, bracing, physical therapy, night splinting, and NSAIDs)
      5. Tertiary options in failed cases less predictable (glycerol, brisement, TOPAZ, surgical debridement and FHL transfer)
   B. Platelet Rich Plasma
      1. Bioactive component of whole blood
      2. Platelets function in clotting cascade
      3. Alpha granules: cytokines & growth factors
      4. Dense granules: adenosine, histamine, & serotonin
      5. Whole blood 200,000 / mcl; PRP 2,000,000 / mcl
      6. Over 5,000 basic science and clinical studies

II. Research
   A. Materials / Methods
      1. Prospective longitudinal long term clinical trial
      2. 30 patients (17 females : 13 males)
      3. Average age 47 / LOS 8 months / MRI confirmed
      4. Treated with 4 cc of PRP (Exactech Accelrate)
      5. Ultrasound needle guidance directly into tendon
      6. Post-injection cam walker and HEP eccentric exercise
   B. Results
      1. Pre-PRP AOFAS score 34 (20-61)
      2. Post-PRP one month AOFAS 84 (76-88)
      3. Post-PRP six months AOFAS 92 (90-100)
      4. Post-PRP twelve months AOFAS 90 (88-100)
      5. Post-PRP twenty-four months AOFAS 85 (86-100)
      6. Clinical satisfaction 27/30 (two later had surgery)
      7. No complications

III. Conclusions
   A. PRP can effectively and durable treat chronic Achilles tendonosis that is refractory to traditional treatment paradigms (contradicts DeVos’ study)
   B. Future research focusing on role of WBCs in PRP and isolating individual cytokines