A Prospective, Randomised, Controlled Trial to Assess the Efficacy of Whole Blood or Platelets in the Treatment of Chronic Achilles Tendinosis

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Introduction
The purpose of this prospective, randomised, double blinded controlled study was to assess the efficacy of whole blood, platelets, and saline in the treatment of chronic Achilles tendinosis. Chronic Achilles tendinosis is a common condition affecting an area approximately 8-10cm above the Achilles tendon and the use of ultrasound guided injection of blood is becoming more popular. This study attempts to determine whether this procedure provides any benefit in the treatment of chronic Achilles tendinosis.

Methods
48 Patients were recruited from foot and ankle specialist clinics and randomized into four groups. All patients were assessed by radiologists experienced in the treatment of Achilles Tendinosis for alternate pathology such as partial tears and insertional Tendinopathy. Blood was drawn from all patients and local anaesthetic instilled into the skin over the affected area of the tendon. The first group received an injection of whole blood under ultrasound guidance into the Achilles Tendon. The second group received an injection of Buffy coat after spinning of the whole blood into its components. The third group received saline and the fourth group had a placebo with no injection into the Achilles tendon. The trial was double blinded so neither the patient nor the referring practitioner had knowledge of which treatment the patient was to undergo. Ultrasound examination of the tendon as well as Visa-A scores were carried out at the time of injection and at twelve weeks.

Results
There was no improvement seen in the treatment arm with either blood or platelets compared to the saline or placebo groups. This was also found when the Visa-A score was disaggregated to the pain and function questions and analysed separately.

Conclusion
The study finds no efficacy in treating chronic Achilles tendinosis with injection of either blood or Buffy coat; therefore this treatment should not be continued. It is both expensive and potentially harmful to the patient and is very labour intensive to the practitioner and health system in general. The use of blood injected into tendons and ligaments is becoming more common place within the community however there is no strong literature to support its use. This study indicates that the use of injected Autologous blood cannot be supported in the treatment of chronic Achilles tendinosis.