Platelet-rich plasma injection for adults with acute Achilles tendon rupture: the PATH-2 RCT

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Plain English summary

The PATH-2 RCT

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Plain English summary

Achilles tendon rupture (ATR) is a common injury and leads to months of difficulty with walking. The tendon attaches calf muscle to the heel. Most ATRs in the UK are treated by immobilising the lower leg in a plaster cast or boot, followed by months of exercises to restore calf muscle strength. Absence from work often lasts 2–3 months.

Platelets are the smallest blood cells and contain proteins that promote healing. Platelet-rich plasma (PRP) is a concentrate of a patient's own blood. Laboratory experiments suggest that it could improve tendon healing. The effects of PRP on ATR healing in adults were investigated and recovery using patient-reported measures was measured.

Using a computer, 230 patients from 19 hospitals were randomly allocated to receive either a PRP injection or an imitation injection (placebo). Patients having surgical repair of the tendon were not included. Participants were assessed before treatment and at 4, 7, 13 and 24 weeks after treatment. Information was collected on calf muscle strength, quality of life, pain and whether or not participants recovered the ability to do activities important to them. Any problems with their recovery were monitored. Participants' blood was tested for proteins known to help healing. In 16 participants, tiny samples of tendon tissue were taken to assess the healing.

There were no differences between participants injected with PRP and participants receiving the placebo in calf muscle strength or in the patient-reported measurements. This meant that PRP did not improve tendon healing during the 24 weeks. Complications were similar, with one out of 20 participants in each group having a further tear of the tendon. The number of platelets in PRP did not influence the outcome. The biopsies showed similar healing between the PRP and placebo groups.

It is concluded that PRP does not improve recovery from ATR over 24 weeks. Participants will be reassessed at 2 years. PRP is widely used for other musculoskeletal problems and should be tested just as rigorously in those contexts.

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This report

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