

## **Plantar Fasciosis Study: Dextrose vs PRP**

- Kim E, Lee JH. Autologous platelet-rich plasma a versus dextrose prolotherapy for the treatment of chronic recalcitrant plantar fasciitis. *PMR*. 2014;6(2):152-158.

[ **Commentary by K. Dean Reeves, M.D.** [www.DrReeves.com](http://www.DrReeves.com) ]

A 2014 publication by Kim et al from Seoul, Korea, was a single blind (subject blinded) comparison of dextrose versus PRP injection in the plantar fascia of those with chronic plantar fasciosis.

## Plantar Fasciosis Study Method

- Twenty one patients with chronic plantar fasciosis with more than 4 mm thickness of plantar fascia.
- Injection at time 0 and 2 weeks with 2 ml of PRP or 15% dextrose/lidocaine.
- Outcome measures: Foot Functional Index pain, disability and activity limitation subscales.
- Data collected at 0, 2 and 6 months.

The method is clear. Two injections of each at 2 week intervals. It is notable that this is shorter than the usual healing interval of 6 to 8 weeks.

## **Plantar Fasciosis Study Result (6 month)**

- Foot Functional Index Improvement:  
26% Dextrose 46% PRP
- Pain Subcategory Improvement:  
27% dextrose 44% PRP
- Disability Subscale Improvement:  
24% Dextrose 43% PRP

Note there were errors in calculations of percentage for foot functional index, pain and disability. Given the numbers provided, the percentage improvements are as summarized as above. The values above are correct.

On the foot function index improvement with standard deviation in parentheses for Dextrose group was from 132.5(31.1) to 97.7(52.5) = 26% and for the PRP group was from 151.5(37.9) to 81.6 (55.3) = 46%. The article stated 15.1% and 30.4%

Pain subcategory improvement: 56.5(14.0) to 41.14(21.4) = 27% for dextrose and 60.4(14.7) to 33.7(23.4) = 44% for PRP. The article stated 17.1% and 29.7%

Disability subscale improvement: 53.1(15.7) to 40.3(21.8) = 24% dextrose and 55.8(19.5) to 31.9(22.4) = 43% PRP.

Note 1 dropped out of the PRP group, which can make a difference in the outcome AND the groups were small, which explains why the outcomes are not significantly different although they appear to be trending in favor of PRP. Note PRP is more expensive and this study does not address cost effectiveness.

<b>Key Features</b>	<b>RTCP: Plantar Fasciosis PMR 2014</b>	
<b>Good Size</b>	<b>Small</b>	
<b>Sig Clinically</b>	<b>Yes in both groups.</b>	
<b>Sig Statistically</b>	<b>No control group.</b>	
<b>Adequate F-UP</b>	<b>6 months.</b>	
<b>Data Capture</b>	<b>Good to 6 months.</b>	
<b>Accepted Tool</b>	<b>Yes (HAQ) (Hand Assessment Questionnaire)</b>	
<b>Simple</b>	<b>Yes</b>	
<b>Inexpensive</b>	<b>Moderate, with ultrasound guidance and PRP.</b>	
<b>Min invasive</b>	<b>Two injection sessions.</b>	
<b>Practical PC</b>	<b>Moderate technology.</b>	
<b>Grade</b>	<b>II</b>	

This was randomized and blinded treatment comparison study of those with pain duration mean of 2.8 years. The results in both groups were significant clinically. Both were active groups and the results were not significantly different from each other. Follow up was somewhat short at 6 months.

Data capture was good, but with 1 dropout in a small study, not excellent.

Given that this was a treatment comparison study, and small, although blinded, it would be a level II study.