protocol; blood was centrifuged firstly at 1000 rpm for 10 minutes. The plasma was then transferred to a new glass tube and centrifuged at 3000 rpm for 15 minutes. Platelets will form a pellet at the bottom of the tube. Finally, a pure platelet rich plasma was obtained with a concentration 4 times greater than baseline. Ca gluconate was mixed with PRP (in a ratio of 0.3 ml ca gluconate/ml PRP) immediately before the injection. Under ultrasound guidance, 3ml PRP was injected slowly into the bursa without usage of local anesthetics prior to injection. Post injection, patients were advised to rest, use cold packs and were allowed to do light range of motion exercises 2-3 days post injection. Acetaminophen was allowed for tolerable post injection pain.

Results: Statistical analysis was made to 60 patients. Intragroup analysis showed statistical significant difference in both groups at follow up compared to baseline regarding clinical, functional and radiological data. Inter-group analysis showed more significant results in PRP group regarding clinical assessment (p < 0.001), functional assessment (SPADI, PS, DS and total) and WORC scores (p < 0.001) and sonographic assessment in (subscapularis tendinopathy, supraspinatus tendinopathy, supraspinatus fibrillar tendon disruption and supraspinatus tendon thickness) (p < 0.0001) and sonographic subacromial subdeltoid bursitis (p = 0.001).

Conclusion: Single PRP injection is an effective mean of treatment of RCT as it improves patients' quality of life clinically, functionally and structurally, better than traditional physical therapy program.

REFERENCES:

Disclosure of Interests: None declared

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THE EFFECT OF ADDITION OF BUFFERED DEXTROSE SOLUTION ON PAIN OCCURRING DURING LOCAL STEROID INJECTION FOR PLANTAR FASCIITIS

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Background: 5% dextrose water (DSW) has been previously reported to decrease pain when co-administered with noxious agents as chemotherapeutic and microspheres1-3. It has also been reported to have an immediate analgesic effect on low back pain and radiculopathy when injected epidurally4.

Objectives: To evaluate the potential immediate analgesic effect of DSW when added to the injectate during local steroid injection for treatment of plantar fasciitis.

Methods: In this single blind study, a total of 122 patients with plantar fasciities were randomly assigned to receive either 40 mg triamcinolone acetonide/1ml + 0.5ml lidocaine 2% (group A: 61 patients; 73 heels) or 40mg triamcinolone acetonide/1ml+0.5ml lidocaine2%+ 0.5ml buffered DSW (group B: 61 patients; 69 heels) as a local injection using the medial approach. Clinical assessment including disease duration, BMI, history of previous injection and post-injection complications and 2week recurrence rate was performed. Plain X-ray lateral view on the painful heel was obtained for diagnosis of associating calcaneal spur. Visual analogue scale (VAS 0-10) was used to assess the degree of pain intensity during injection.

Results: There were no significant difference between both groups regarding age, sex or BMI where the mean for age was 42.56 years in group A and 43.39 years in group B (P = 0.86), the male to female ratio was 16:45 in both groups and the mean for BMI was 31.49 in group A and 30.86 in group B (P=0.51). The mean disease duration was 6.02 months in group A and 10.77 months in group B (P=0.005). Calcaneal spur was diagnosed in 60 patients (82%) in group A and in 47 patients (68%) in group B. A highly significant difference in VAS was observed as the mean was 8.26±2.00 in group A and 4.25±2.05 in group B (P <0.0001) with a confidence interval (95% CI) of 7.78 -8.74 for group A and 3.76 - 4.72 for group B. On 2 week follow up, only 4 patients in each group reported a recurrent heel pain. No injection related side effects or complications have been reported.

Conclusion: The addition of 0.5 ml DSW can significantly decrease the pain associated with local steroid injection for treatment of plantar fasciitis.

REFERENCES:
PAIN RELIEF AND GAIN OF FUNCTION FROM LOW DOSE RADIOThERAPY FOR EPICONDYLITIS, FINGER OSTEARTHritis AND PLANTAR FASCIItis – RESULTS OF A PROSPECTIVE CLINICAL TRIAL

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Background: Low dose radiotherapy (LDRT) is an effective treatment for therapy-resistant musculoskeletal disorders that is associated with only minimal toxicities and low costs [1]. As the population in many countries ages and such disorders result in significant impairment in quality of life and costs, there is now a wider international interest in LDRT for these conditions [2]. Numerous retrospective series describe the benefits of LDRT for non-malignant joint disorders, with response rates between 63-89% [1], but randomized and prospective data are scarce [4, 5, 6].

Objectives: To prospectively evaluate pain, function and quality of life after low dose radiotherapy (LDRT) in patients with lateral and medial epicondylitis (LE and ME), finger osteoarthritis (OA) and plantar fasciitis (PF).

Methods: Patients over 40 years old were recruited to this single center trial. LDRT (8 x 0.5 Gy, 200 kV X-rays) was repeated once up to a total dose of 8.0 Gy. Pain scores (visual analogue scale=VAS), function tests and quality of life questionnaires were documented at 0, 2, 6, and 12 months.

Results: 204 sites were treated. At 12 months after last LDRT (first or second course) compared with baseline prior to first LDRT: 39 LE sites reported pain reduction (median change in VAS) at rest (-2.5, p<0.001), during activity (-6.0, p<0.001) and increase in handgrip strength (median change: extension 16 kg, p<0.001, flexion 5.2 kg, p=0.002). 10 ME sites showed pain relief at rest (-3.0, p=0.041), during activity (-0.4, p=0.041) and an increase in handgrip strength (6.5 kg, p=0.022). 99 finger OA sites reported significant pain relief during activity (-3.0, p<0.001) with a trend at rest (0.0, p=0.056) and gain in handgrip strength (2.5 kg, p=0.004) with a trend to stronger pinch grip (0.5 kg, p=0.059). 56 PF sites reported reduction in pain scores at rest (-4.0, p<0.001), during activity (-6.0, p<0.001) and an improvement in the walking test (-5.0 seconds, p<0.01). A trend towards improved quality of life was seen in patients with ME and PF.

Conclusion: Patients with LE and ME, finger OA and PF achieved sustained analgesia and an objective improvement in musculoskeletal function 12 months after completion of LDRT with 4-8 Gy comparing a standard dose with a very low dose: Mature results after 12 months’ follow-up. Int J Radiat Oncol Biol Phys 2012;84:e455-462.

Disclosure of Interests: None declared

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