- [2] K. J. Paprottka, S. Lehner, W. P. Fendler et al., "Reduced periprocedural analgesia after replacement of water for injection with glucose 5% solution as the infusion medium for 90Y-Resin microspheres," *Journal of Nuclear Medicine*, vol. 57, no. 11, pp. 1679–1684, 2016.
- [3] Maniquis-Smigel L., Reeves K. D., Rosen H. J. et al., "Short term analgesic effects of 5% dextrose epidural injections for chronic low back pain: a randomized controlled trial," *Anesthesiology and Pain Medicine*, vol. 7, no. 1, Article ID e42550, 2017.

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.2008

THU0498

PAIN RELIEF AND GAIN OF FUNCTION FROM LOW DOSE RADIOTHERAPY FOR EPICONDYLITIS, FINGER OSTEOARTHRITIS AND PLANTAR FASCIITIS – RESULTS OF A PROSPECTIVE CLINICAL TRIAL

Brigitte Eberle¹, Susanne Rogers¹, Debroach Vogt², Elisabeth Meier¹, Lorenz Moser¹, Silvia Gomez¹, Susanne Desborough¹, Istvan Takacs³, Hasler Paul¹, Stephan Bodis^{1,4}, ¹Kantonsspital Aarau, Aarau, Switzerland; ²University of Basel and University Hospital of Basel, Basel, Switzerland; ³Kantonsspital Baden, Baden, Switzerland; ⁴University Hospital Zurich, Zurich, Switzerland

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% [3], 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 (PIF).

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=0.099). 56 PIF 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<0.001). A trend towards improved quality of life was seen in patients with ME and PIF.

Conclusion: Patients with LE and ME, finger OA and PIF achieved sustained analgesia and an objective improvement in musculoskeletal function 12 months after completion of LDRT with 4-8 Gy.

REFERENCES:

- [1] Keilholz L et al. Radiotherapy for painful degenerative joint disorders. Indications, technique and clinical results. *Strahlenther Onkol* 1998;174:243-250.
- [2] Taylor RE et al. Radiotherapy for benign disease: Current evidence, benefits and risks. *Clin Oncol* 2015;27:433-435.
- [3] Seegenschmiedt MH et al. Radiotherapy for non-malignant disorders: State of the art and update of the evidence-based practice guidelines. *Br J Radiol* 2015;88:20150080.
- [4] Ott OJ et al. Radiotherapy for calcaneodinia. Results of a single center prospective randomized dose optimization trial. *Strahlenther Onkol* 2013;189:329-334.
- [5] Prokein B et al. Radiotherapy of painful heel spur with two fractionation regimens : Results of a randomized multicenter trial after 48 weeks' follow-up. *Strahlenther Onkol* 2017;193:483-490.
- [6] Niewald M et al. German Cooperative Group on Radiotherapy for Benign Diseases of the German Society for Radiation O. Randomized, multicenter trial on the effect of radiation therapy on plantar fasciitis (painful heel spur)

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

DOI: 10.1136/annrheumdis-2019-eular.4591

THU0499

RISK FACTORS FOR SHOULDER PAIN PERSISTENCE IN ROTATOR CUFF DISORDERS

Sandica Albina¹, Ana-Maria Ramazan². ¹Rehabilitation Clinical Hospital, Rehabilitation Clinic, Eforie Nord, Romania; ²Emergency County Clinical Hospital "Sf Apostol Andrei", Rheumatology, Constanta, Romania

Background: A large proportion of patients with atraumatic painful shoulder have an unfavorable outcome with long-term disability (1). Predictors of no recovery in patients with shoulder disorders were identified previously: repetitive overhead activity in sport and work (2) duration of complaints, somatization, low social support, older age, unemployment, musculoskeletal comorbidity, recurrent complaint (3,4).

Objectives: To identify the risk factors for over 6 month pain persistence in patients with rotator cuff disorders

Methods: Our prospective study included 51 hospitalized patients with atraumatic shoulder pain. The assessment was clinical and shoulder MRI for confirmation of rotator cuff disorders. We have studied the influence of the patient's characteristics and the influence of the condition's characteristics for pain persistence. Statistical analysis was performed in SPSS-18, p<0.05 was significant.

Results: No significant correlations were found between pain persistence and age, gender, smoking status, occupational overuse, physical demands before the onset of pain, marital status, continuous pain, lesions on shoulder MRI. The association with the following elements is statistically significant for pain persistence: opposite shoulder previously affected (p=0.01), diabetes mellitus (p=0.04), insidious onset (p=0.004), the high educational level (p=0.02), physical therapy (p=0.03), local injection (p=0.08). Using multinomial regression we observed only acute onset of the pain shoulder (RR=7.1) and physiotherapy treatment (RR=0.1) with p=0.026.

Conclusion: The factors that determine the shoulder pain persistence are non-specific and can be sometimes psychosocial, local, physical or other comorbidities like diabetes.

REFERENCES:

- [1] Herin F et al. Predictors of chronic shoulder pain after 5 years in a working population. *Pain*. Volume 153, Issue 11, Pages 2253-2259, November 2012
- [2] Coggon D., Ntani G., Vargas-Prada S., et al. International variation in absence from work attributed to musculoskeletal illness: findings from the CUPID study. *Occup Environ Med*. 2013 Aug;70(8):575-84.
- [3] Keijsers E et al. *Psychosocial factors predicted nonrecovery in both specific and nonspecific diagnoses at arm, neck, and shoulder*. *J Clin Epidemiol*. 2010 Dec;63(12):1370-9;
- [4] Feleus A et al. Prognostic indicators for non-recovery of non-traumatic complaints at arm, neck and shoulder in general practice—6 months follow-up. *Rheumatology* 2007;46:169–176

Disclosure of Interests: None declared

DOI: 10.1136/annrheumdis-2019-eular.1231

THU0500

PELVIC CONGESTION SYNDROME, UNCOMMON CAUSE OF LOW BACK PAIN

Jose Luis TANDAIPAN JAIME¹, Mireia Castillo Vilella², Laura Berbel Arcobe¹, Georgina Salvador Alarcon³, Nuria Gimenez Gomez³, Lluís Moga Donadeu⁴, Josep Royo Serrando⁴, Elena Riera Alonso¹, Silvia Martinez Pardo¹, ¹Rheumatology Hospital Universitari Mutua Terrassa, ²Hospital Universitari Mutua de Terrassa, ³Rheumatology, Terrassa, Spain; ⁴Hospital Universitari Sagrat Cor, ⁵Rheumatology, Barcelona, Spain; ⁶Hospital Universitari Mutua de Terrassa, ⁷Epidemiology, Terrassa, Spain; ⁸Hospital Universitari Mutua de Terrassa, ⁹Vascular Surgery, Terrassa, Spain

Background: The pelvic congestion syndrome (PCS) is an under and often misdiagnosed entity that appears more frequently in premenopausal age and multiparous women. The pathophysiology consists of a sum of phenomena including venous stasis and inversion of the pelvic venous flow that cause varicose veins and congestion. The left ovarian vein is usually the most affected. Typically it presents as a dull, chronic abdominal-pelvic (AP) pain, which worsens with menstruation and prolonged