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SAT0592 **EFFECT OF INTERFERENTIAL CURRENT THERAPY IN PATIENTS WITH SUBACROMIAL IMPINGEMENT SYNDROME: A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY**

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Background: Shoulder pain is one of the most common types of musculoskeletal pain in the adult population. Subacromial impingement syndrome (SIS) has been reported to be the most frequent etiologic factor for shoulder pain (1). A conservative approach comprising non-steroid anti-inflammatory drugs (NSAID), subacromial injections, exercise, and several physical therapy agents is recommended as the first step treatment for SIS (2). Although interferential current (IFC) is a common electrotherapeutic modality used to treat musculoskeletal pain, there isn't any randomized controlled trial investigating its clinical efficacy on SIS (3).

Objectives: To investigate the effectiveness of IFC treatment in patients with SIS.

Methods: In this double blind, placebo controlled study, patients with shoulder pain, who had been diagnosed SIS according to clinical evaluation and subacromial injection test were randomly assigned to the IFC or placebo groups. Exercise, cryotherapy, and NSAID were applied to the all groups. Daily 20 min per session, 5 days per week, for 2 weeks 10 sessions IFC with alternative method were applied to the IFC group while sham IFC therapy were applied to the placebo group with the same protocol. Visual analog scale (VAS), Constant Murley Scale (CMS) and Shoulder Disability Questionnaire (SDQ) were used for evaluation at baseline, post-treatment and 1 month post-treatment.

Results: A total of 60 patients were completed the study; 26 (43.3%) were male and mean age was 50.02±9.10 years. There was not a significant difference in demographic and clinical data of the patients between the IFC (n=30) and placebo (n=30) groups (p>0.05). Significant improvement in all parameters was observed on post-treatment and 1 month post-treatment evaluations compared to baseline evaluations in both groups (p<0.01). Comparison of the VAS, CMS and SDQ scores between the two groups did not show significant difference either pre-treatment or post-treatment (p>0.05).

Conclusions: This study showed that IFC treatment does not provide additional benefit to NSAID, cryotherapy and exercise program in the treatment of SIS. Further studies are needed to investigate the long-term effects of IFC therapy.

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SAT0593 **GENDER-SPECIFIC ASSOCIATIONS BETWEEN FAT MASS AND MUSCULOSKELETAL PAIN IN COMMUNITY RESIDENTS: A 3-YEAR LONGITUDINAL STUDY**

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Background: Increase in fat mass is correlated with musculoskeletal pain

Objectives: In this study, we sought to delineate the prospective relationship between fat mass parameters and the musculoskeletal pain in Korean community residents.

Methods: In the Korean Health and Genome Study, 1,325 participants (mean age 60.2 years, 56.2% women) who completed pain questionnaires and underwent dual x-ray absorptiometry to calculate body composition had 3 year follow-up data on pain. Pain was categorized according to number of pain regions. After 3 years of follow-up, subjects were classified into the followings: 1) no pain both at baseline and at 3 years (no pain), 2) any pain (one, two or more, or widespread regions) at baseline and no pain at 3 years (transient pain), 3) no pain at baseline and any pain at 3 years (new pain) 4) any pain both at baseline and at 3 years (persistent pain). 1) and 2) were grouped as no/transient pain group (no pain) and 3) and 4) as new/persistent pain group (pain)

Results: Female gender and obesity were 2 significant factors associated with the persistence or development of pain. Total fat mass and fat:muscle mass ratio were significantly correlated with pain, and the odds ratios for pain were significantly increased in subjects in the highest quartile of fat muscle ratio after adjustment among female subjects only. Among normal weight subjects, those without metabolic syndrome were less likely to belong to the pain group, especially among women.

Conclusions: The association of fat mass and pain was only significant among females

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SAT0594 **THE EFFECT OF RADIAL EXTRACORPOREAL SHOCK WAVE THERAPY (RESWT) IN THE TREATMENT OF TRIGGER FINGER**

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Background: Trigger finger is a stenotic tendovaginitis characterized by hand pain and dysfunction, commonly encountered and easily recognizable (1). RESWT is frequently used in the treatment of soft tissue pathologies such as lateral epicondylitis, plantar fasciitis and calcific rotator cuff tendinitis (2-3). However, there is no study examining whether RESWT is effective on the trigger finger or not.

Objectives: The aim of this study was to investigate the effect of Radial Extracorporeal Shock Wave Therapy (RESWT) in the Treatment of Trigger Finger.

Methods: This study was carried out on 16 patients (18 patient hand) who had been diagnosed with trigger finger that grade 1,2,3 according to quinnel classification. Patients were carried out as a single group. 16 patients (18 patient hand) with trigger fingers were applied to ten-sessions, twice a week of RESWT (2000 impulses, 2 bar, 10 Hz). Pain scores (Numeric Pain Rating Scale - NRS), general functional capacities (The Disabilities of the Arm, Shoulder and Hand Score (Quick-DASH)), range of motion, grip strength (GS) and pinch strenght (PS) were assessed at every week for five weeks during treatment and 3 months after treatment.

Results: 13 female and 3 male patients over 18 years of age were evaluated. In the evaluations performed every week during 10 sessions of RESWT treatment and 3 months after treatment, decrease in pain levels and increase in general functional capacity, range of motion, grip strength and pinch strength were observed in the patients treated (p<0.001) (table 1).

Table 1: Comparison of range of motion of the thump finger and 2-5. Finger, comparison of pain, grip strenght, pinch strenght and general functional capacity.

	1 week (IQR)	2 week (IQR)	3 week (IQR)	4 week (IQR)	5 week (IQR)	3 month (IQR)	p value
MCF joint flexion	45.00 (40.00;50.00)	48.00 (40.00;50.00)	49.00 (40.00;52.00)	50.00 (40.00;58.00)	50.00 (40.00;60.00)	50.00 (50.00;65.00)	0.004
IF joint flexion	15.00 (00.00;35.00)	20.00 (00.00;42.00)	28.00 (00.00;45.00)	39.50 (00.00;50.00)	45.00 (00.00;60.00)	55.00 (00.00;60.00)	<0.001
MCF joint flexion 2-5	80.00 (50.00;90.00)	80.00 (50.00;90.00)	82.50 (52.00;90.00)	82.50 (54.00;90.00)	82.50 (55.00;90.00)	90.00 (60.00;90.00)	<0.001
PIF joint flexion 2-5 finger	100.00 (40.00;110.00)	100.00 (50.00;113.00)	100.00 (55.00;115.00)	100.00 (65.00;118.00)	100.00 (70.00;120.00)	110.00 (90.00;120.00)	<0.001
DIF joint flexion 2-5 finger	50.00 (20.00;75.00)	55.50 (20.00;75.00)	60.00 (30.00;77.00)	61.50 (40.00;77.00)	61.50 (50.00;80.00)	70.00 (60.00;85.00)	<0.001
NRS	7.00 (0.00;10.00)	6.00 (0.00;7.00)	4.00 (0.00;7.00)	3.00 (0.00;7.00)	2.00 (0.00;7.00)	0.00 (0.00;7.00)	<0.001
GS	16.00 (4.00;30.00)	17.00 (12.00;40.00)	16.00 (10.00;36.00)	18.00 (8.00;36.00)	19.00 (8.00;28.00)	18.00 (12.00;36.00)	=0.001
PS	3.00 (1.00;10.00)	3.50 (2.00;11.00)	3.00 (1.00;9.00)	4.00 (2.00;12.00)	4.00 (2.00;12.00)	4.00 (2.00;12.00)	<0.001
Quick-DASH	42.04 (00;70.45)	39.76 (00;70.45)	38.40 (00;68.18)	18.18 (00;70.45)	4.54 (00;68.18)	0.00 (00;25.00)	<0.001

Friedman test, p<0.001, MCF: Metacarpofalangeal, IF: Interfalangeal, PIF: Proximalinterfalangeal, DIF: Distalinterfalangeal, IQR: Interquartile Range

Conclusions: According to our results; RESWT might be an effective method to decrease pain severity, improve general functional capacity, range of motion, grip strength and pinch strength in patients with trigger finger.

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SAT0595 **EFFECTIVENESS OF SHORT WAVE DIATHERMY TREATMENT IN PATIENTS WITH SUBACROMIAL IMPINGEMENT SYNDROME AND VALUE OF NIGHT PAIN ON PATIENT SELECTION: A DOUBLE-BLIND, RANDOMIZED, PLACEBO-CONTROLLED TRIAL**

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Background: Shoulder impingement syndrome (SIS) is a common causes of shoulder pain and the night pain is a frequent symptom of this condition (1,2). Short wave diathermy (SWD) is a deep diathermic agents used in the treatment of