Neck pain -NP- or Mechanical Low Back pain -LBP-). Nevertheless, there is not enough evidence regarding if ROM and MMPs are different in both types of spinal pain.

Objectives: To identify differences between axSpA patients and NP or LBP subjects, in cervical and lumbar ROMs and MMPs at rest.

Methods: Subjects with axSpA and with NP or LBP composed the Inflammatory pain Group (IG) and the Mechanical pain Group (MG), respectively. For the analysis of the spinal mobility, two Inertial Measurement Units (IMU) were used. For both spinal regions (cervical and lumbar - Figure 1A,B) 3 repetitions of flexion-extension, lateral-flexion, and rotation were executed separately[1]. A record of the MMPs using a hand myotonometer was made in both lumbar (muscular belly of the erector spinal - Figure 1D) and cervical (the semispinalis capitis muscles at C4 - Figure 1C) spine in prone position with both arms along the body. The MMPs recorded in this study included: frequency (tone), stiffness, decrement (elasticity), relaxation and creep (viscosity). The order of assessments (right/left) was randomized. Since no side-to-side differences in either group were observed, the mean of both sides was considered. Student-t tests were used to compare the groups, and Cohen-d effect size index was estimated as a measure of the size of difference. $P < 0.05$ was considered statistically significant.

Results: 61 subjects in IG (42% women, age 41 ± 12 years, BMI 25 ± 3) and 66 in MG (51% women, age 38 ± 13 years, BMI 25 ± 3) participated in this study. No significant differences were identified in sociodemographic data between both groups. Table 1 shows ROM and MMPs between groups. All lumbar ROMs were significantly lower in the IG, with the different between means achieving the minimum clinical important difference ($> 8^\circ$) for flexion-extension and lateroflexion. On the contrary, the cervical ROMs were not different between groups, and showed the highest variability, probably related to compensatory mechanisms due to lumbar ROMs restrictions. The IG showed greater Lumbar stiffness than the MG with large effect size ($d = 0.94$). No other difference in MMPs was identified in this region ($p > 0.05$). Regarding the cervical region, all MMPs showed differences between groups. Thus, tone, stiffness and elasticity were higher in the IG, while relaxation and viscosity were lower. In all cases, except for decrement, the effect size was from moderate to large ($0.6 < d < 0.8$).

	IG (n=61)	MG (n=66)	p-value	Cohen-d
Lumbar flexion- extension ($^\circ$)	62.7 ± 20.2	70.8 ± 17.9	0.019 *	0.42
Lumbar rotation ($^\circ$)	25.6 ± 8.3	30.1 ± 10.1	0.007 *	0.48
Lumbar lateral-flexion ($^\circ$)	46.6 ± 12.3	54.8 ± 10.8	< 0.001 *	0.70
Cervical flexion- extension ($^\circ$)	96.5 ± 21.6	96.2 ± 18.8	0.941	0.01
Cervical rotation ($^\circ$)	130.9 ± 27.3	131.9 ± 25.6	0.817	0.01
Cervical lateral-flexion ($^\circ$)	66.4 ± 21.5	71.6 ± 15.6	0.122	0.27
Lumbar tone (Hz)	15.32 ± 3.40	14.52 ± 1.93	0.129	0.29
Lumbar stiffness (N/m)	330.85 ± 56.93	272.48 ± 65.59	0.001 *	0.94
Lumbar decrement	1.33 ± 0.41	1.29 ± 0.32	0.480	0.10
Lumbar relaxation (ms)	19.11 ± 7.58	20.23 ± 4.29	0.312	0.18
Lumbar creep	1.16 ± 0.43	1.21 ± 0.22	0.519	0.14
Cervical tone (Hz)	17.27 ± 1.93	16.17 ± 1.84	0.001 *	0.58
Cervical stiffness (N/m)	313.93 ± 54.17	282.61 ± 50.07	0.001 *	0.59
Cervical decrement	1.34 ± 0.23	1.42 ± 0.18	0.020 *	0.39
Cervical relaxation (ms)	16.66 ± 2.52	18.49 ± 2.74	< 0.001 *	0.69
Cervical creep	1.02 ± 0.14	1.13 ± 0.14	< 0.001 *	0.80

Conclusion: AxSpA patients present lower lumbar ROMs than NP and LBP subjects. Further, posterior cervical MMPs of axSpA are more rigid and less viscoelastic than those of NP and LBP subjects. ROMs and MMPs show a different behavior pattern in cervical and lumbar regions when spinal pain from different origin is assessed.

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POS1273 A CHANGE IN A REHABILITATION MODEL INCREASES WORK CAPACITY AT 36 MONTHS IN LOW BACK PAIN

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Background: In chronic low back pain, the most expensive patients are them with long-standing sick-leave of more than 6 months. Several studies have showed the importance of rehabilitation models working with kinesiophobia (fear of movement). One possibility of treating chronic low back pain is a multidisciplinary rehabilitation program.

Objectives: The aim of this study was to analyze the impact of a change in a rehabilitation program for chronic lumbar pain by introducing a progressive exposure procedure to decrease apprehension associated with low back pain. We studied its impact on work capacity after 3 years, compared to our classic program.

Methods: We have compared the results of 1004 of our patients that have accomplished a multi-disciplinary program and that have been followed over 12 months. They were divided in two groups: one before the implantation of PHODA (PHOTO of Daily Activity: photos showing activities) associated with occupational training and work exposure. Then a second one including 200 patients that followed the new program. The program contained physical training, occupational tasks developed on the basis of the apprehension following a cognitive-comportemental approach.

We have analyzed the evolution of apprehension according to different questionnaires (FABQ, Tampa scale (TSK) and PACT (evaluating the subjective work capacity)), the Phoda results and the official work capacity at beginning of the program and after 36 months.

Results: We saw a clear increase in the global work capacity at 12 months after completing the program: passing from 40 to 79% ($p < 0.01$) in the old program comparing to the new one with an increase of 86% ($p < 0.01$). These results were confirmed at 36 months, with stabilized results. In parallel there was an increase in the subjective sensation of physical capacity (Pact), but less in the new program. This increase was correlated with a decrease in fear-avoidance according to the Fabq, and in the TSK

Conclusion: In chronic low back, a multidisciplinary rehabilitation program, gives a global work capacity of 79%. This capacity could be increased on focalising on patient's apprehensions with gradual exposure according the fear-avoidance model developed by Waddell and explored by Vlaeyen. The correlation were confirmed on the psychological part, with less apprehension and less anxiety. Finally, the SF 36 showed an increase in body confidence as an important factor in these functional restoration programs.

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POS1274 THERAPEUTIC MANAGEMENT OF RHEUMATOLOGISTS VERSUS OTORHINOLARYNGOLOGISTS OF CERVICOGENIC DIZZINESS

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Background: The treatment of patients presenting with cervicogenic dizziness (CGD) may be challenging. Indeed, there is no consensual treatment approach for CGD, nor is there no gold-standard assessment for diagnosis.

Objectives: Our study aimed to assess the management of CGD by rheumatologists versus otorhinolaryngologists.

Methods: We conducted a cross-sectional study including Tunisian doctors dealing with CGD. Rheumatologists (RTO) and otorhinolaryngologists (ORL) were invited to answer a questionnaire via google form about CGD daily management. Outcomes of interest were treatment modalities.

Results: The study included 30 RTO and 32 ORL. Most of the doctors (RTO, vs ORL) were females (88.3%, vs 56.3%), aged between 35 and 45 (43.3%, vs 62.5%), and worked at a private practice (33.3%, vs 59.4%). The number of patients diagnosed with CGD by RTO was as follows: 1-2 per year (33.3%), 1-2 per month (18.8%), 1-2 per week (20%), less than one patient a year (10%) and none in 3.3% of cases. The number of patients diagnosed with CGD by ORL was as follows: 1-2 per year (50%), 1-2 per month (33.3%), 1-2 per week (6.2%), less than one patient a year (15.7%) and none (9.4%). Most patients presenting with CGD were females in both groups (93.1%, vs 82.8% respectively) with a mean

age between 36 and 65 (79.3%, vs 82.1%). Most of the respondents declared treating patients with CGD (93.1%, vs 79.1%). Regarding treatment modalities, physical therapy was the most prescribed in both specialties (81.5% and 48.3%, respectively). Only RTO (18.5%) prescribed manual therapy. Concerning medical treatment, anti-inflammatory were the most prescribed drugs in both groups (92.6, and 34.5%, respectively). Sixty-seven percent of RTO prescribed anti-verigo medication. Interestingly, it was the least prescribed drug by ORL (6.9%). Only RTO (59.3%) prescribed Muscle relaxants.

Conclusion: Despite the disparities in the management of CGD, physical therapy remains the first prescribed treatment by Tunisian doctors. Further studies are needed to establish a consensus to treat CGD.

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POS1275 PERITENON THICKENING IS ASSOCIATED WITH THE INTENSITY OF MANUAL SPORTS ACTIVITY

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Background: Peritenon enlargement has been considered as a specific ultrasound finding associated with psoriatic arthritis based on studies in patients. Recent observations in athletes have demonstrated the existence of this finding although its relationship with the type of physical activity performed has not been determined.

Objectives: To determine to what extent manual physical activity is associated with the prevalence of peritenon thickening in the fingers of healthy athletic subjects.

Methods: Thirty-five healthy young male volunteers were recruited from a local sports centre in the community of Madrid. All of them performed sports activities with their hands for more than 12 hours a week. A digital dynamometer was used to determine the flexion strength of the fingers of the dominant hand. A single observer performed an ultrasound scan of this hand to determine the presence or absence of a hypoechoic image surrounding the extensor digitorum tendon of the 2nd, 3rd, 4th and 5th fingers, according to previous definitions. Mean flexion strengths were compared with the number of positive ultrasound findings.

Results: Fifteen volunteers (mean age 24.3 years, BMI 24.4) did not present peritenon enlargement (42.8%). The mean $\pm$ standard deviation of the fingers flexor strength according to the number of peritenon enlargement detected were 43.5 $\pm$ 6.2, 49.2 $\pm$ 3.8, 53.2 $\pm$ 1.64 and 63.0 $\pm$ 4.83 Kg for volunteers with none, 1, 2, 3 and 4 peritenon enlargements, respectively. (ANOVA $P < 0.001$; Pearson's coefficient 0.827, $P < 0.001$). Correlation between BMI, body fat percentage or training hours per week and the number of peritenon enlargement detected was not demonstrated.

Conclusion: Peritenon enlargement, also known as peritenon tendon inflammation, is detectable by ultrasound scan in healthy subjects and it seems to be associated to the physical activity intensity, indirectly measured by the flexor strength of the fingers.

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POS1276 LONG TERM OUTCOME OF MULTIPLE ULTRASOUND GUIDED SUPRASCAPULAR NERVE BLOCK IN TREATMENT OF FROZEN SHOULDER IN DIABETIC PATIENTS

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Background: Frozen shoulder is prevalent among diabetic patients, and usually has aggressive course, with more tendency to be bilateral and resistant to treatment. Suprascapular nerve block (SSNB) is used with increasing frequency by anesthesiologists and rheumatologists in the management of frozen shoulder. We previously introduced a protocol of nine injections for SSNB with better short term outcome than single SSNB injection (1). Long term outcome of SSNB in management of frozen shoulder is still not detected.

Objectives: To evaluate the long term effect of multiple (nine) ultrasound guided supra-scapular nerve block in treatment of diabetic frozen shoulder.

Methods: A retrospective cohort study followed up 40 diabetic patients who received a course of ultrasound guided multiple supra-scapular nerve block (9 injections) on 2014. In this study we retrospectively assessed the patients

from previously recorded data at a mean duration of 6 years after completing the 9 injection course SSNB clinically by measuring the shoulder active range of motion (using a goniometer in three planes: abduction, internal, and external rotation). Visual analogue scale and Functional assessment by shoulder pain and disability index (SPADI).

Results: Thirty four patients (85% of original cohort) completed the long term follow up.

The patients were 19 (55.9%) females, 60.6 y mean age, and the mean of disease duration was 85.6 months. The majority of patients (33 patients 97.05%) continues improvement and gained within normal complete range of motions in all directions and excellent grades of shoulder function (Table 1).

Table 1.

Clinical Parameters	At base line	At 4 months	Last follow up at (72months $\pm$ 4)	**P value
SPADI pain score (100)	(68.8 $\pm$ 0.5)a	(10.3 $\pm$ 7.4)b	(0.9 $\pm$ 1.9)c	0.00*
SPADI disability score (100)	(69.2 $\pm$ 7.7)a	(6.25 $\pm$ 2.25)b	(0.4 $\pm$ 0.8)c	0.00*
SPADI total (100)	(69.1 $\pm$ 8.5)a	(8.15 $\pm$ 5.4)b	(1.1 $\pm$ 0.9)c	0.00*
Patient global assessment (100)	(90.2 $\pm$ 8.2)a	(8.2 $\pm$ 4.2)b	(0.4 $\pm$ 2.1)c	0.00*
Night pain (100)	(55.4 $\pm$ 10.2)a	(10.3 $\pm$ 4.9)b	(2.3 $\pm$ 1.1)c	0.00*
Abduction (180°)	(77.5 $\pm$ 4.7)a	(170.3 $\pm$ 10.3)b	(174.2 $\pm$ 6.2)b	0.00*
External rotation (100°)	(46 $\pm$ 12.6)a	(80.1 $\pm$ 10.2)b	(86.4 $\pm$ 10.3)b	0.00*
Internal rotation (70°)	(34.5 $\pm$ 2.4)a	(55.4 $\pm$ 10.1)b	(60.2 $\pm$ 9.5)b	0.00*

* $P < 0.05$ there was a statistical significant difference. a, b, c --- the alphabet of different symbols --- means a significant statistical difference between groups. SPADI: shoulder pain and disability index

Conclusion: The multiple injection courses for supra-scapular nerve block has an excellent long term efficacy as treatment of diabetic frozen shoulder. This method should be the treatment of choice in patients of diabetic frozen shoulder who do not respond to physiotherapy.

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POS1277 NON-CONTIGUOUS MULTIFOCAL SPONDYLODISCITIS: A CASE SERIES AND REVIEW OF LITERATURE

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Background: Spondylodiscitis is an infective process of the disc and the two adjacent vertebrae. It is quite a rare disease accounting for 2–7% of all cases of septic osteomyelitis. These spinal infections touch commonly a single level, the lumbar spine being the most affected. Non-contiguous spine level involvement is seldom reported in the literature. This last group is for the most part imputable to granulomatous organisms [1,2].

Objectives: Study the clinical, microbiological, radiological, therapeutic and evolutionary characteristics of non-contiguous multi-levels spondylodiscitis.

Methods: We conducted a retrospective descriptive study over twenty-one years in the Department of Rheumatology. The diagnosis of spondylodiscitis was based on combination of clinical, biological and radiological arguments.

Results: Eight patients had non-contiguous multi-levels infectious spondylodiscitis. There were 6 men and 2 women. The mean age was 53.3 $\pm$ 26.2 years. The mean delay from onset of symptoms to diagnosis was 134.6 $\pm$ 77.6 days. Back pain was the most common symptom. All patients had spinal syndrome. The Signs of spinal cord compression were observed in 3 patients. C-reactive protein levels were elevated in 6 patients (mean: 56 $\pm$ 30.8 mg/L). Plain radiography, performed in all cases, showed pathological pictures in 7 patients. Magnetic resonance imaging was performed in 6 patients. Vertebral levels affected were thoracic / lumbar in 6 cases, cervical/thoracic in 1 case and cervical/lumbar in 1 case. The paravertebral abscess was associated to the disc involvement in 3 cases. Epiduritis was associated in 3 cases. Pathogens were isolated in all cases. Tuberculosis was the most common cause. The leading causative agents in non-tuberculosis spondylodiscitis were staphylococcus aureus, brucella and streptococcus B. Two microorganisms combined were found in two cases (mycobacterium tuberculosis associated to Escherichia coli in one case and mycobacterium tuberculosis associated to Brucella in another). Medical treatment was adapted to the microbial culture and the sensitivity profile of the etiological agent.