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AB0917 PATTERN OF SERUM CHOLECALCIFEROL (VITAMIN D3) LEVEL AMONG THE FEMALE IN RELATION TO CLOTHING'S

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Background: Both clinical and subclinical low level vitamin D is common¹. Various kinds of health hazard including musculoskeletal symptoms are frequently seen among the Vitamin D deficient. It is also not uncommon even in a sunny country. Lack of sun exposure, particularly female using veil may be an important cause.

Objectives: To assess the relationship between using veil and serum vitamin D₃ (cholecalciferol) level

Methods: This prospective cross-sectional descriptive study was conducted during July 2017 to June 2018. Patients with common complaints related to lack of Vitamin D (muscle cramp, myalgia, fatigue, bone pain, generalized weakness, difficulty in getting up, climbing stairs and pain in weight bearing joints) were enrolled. Patient having other disease were excluded from study. Serum cholecalciferol was measured for each patient. Race, occupation, educational status, skin complexion, body mass index, sunlight exposure, covering of body with clothing's and use of sunscreen were taken under consideration in final analysis. Correlation of serum cholecalciferol level with different types of veils (Burkha, halve sleeve, full sleeve, quarter sleeve and Hijab) of individual's was analyzed.

Results: A total 79 female patients were enrolled after screening 108. All of them were of multi-ethnic Asian origin. Age distribution of them is 17 to 39 years 34.2%, 40 to 50 years 38%, 51 to 70 years 26.6% and above 70 years 1.3%. Maximum (93.7%) of them were house wife, 91.1% had no adequate sun exposure and 81% had no skin exposure to sunlight. Among clothing 79.7% used Burkha, 5.1% halve sleeve, 2.5% full sleeve and 12.7% quarter sleeve. Among Burkha 28.6% (18), 55.6% (35) & 15.9% (10) and among quarter sleeve 50% (5), 40% (4) & 10% (1) had deficient, insufficient & sufficient vitamin D level respectively while 2 (100%) female with full sleeve and 4 (100%) female with halve sleeve had deficient and insufficient vitamin D level respectively. The cholecalciferol level among the users of veil is shown in Table-1. There was no significant difference between different types of clothing's (Table: 2).

Abstract AB0917 Table 1. Weight, height and Vitamin D level in different types of clothing's.

Type of clothing		Wt in Kg	Ht in cm	Vit D level (range) in ng/ml
Burkha	Mean	68.63	150.43	(8-40) 23.921
	N	63	63	63
	Std. Deviation	11.706	6.574	6.3074
Halve sleeve	Mean	70.75	150.50	(25-30) 27.000
	N	4	4	4
	Std. Deviation	17.500	1.000	2.4495
Full sleeve	Mean	64.00	145.50	(15-19) 17.000
	N	2	2	2
	Std. Deviation	8.485	13.435	2.8284
Quarter sleeve	Mean	63.40	150.10	(16-38) 23.350
	N	10	10	10
	Std. Deviation	10.834	6.437	6.7497
Total	Mean	67.96	150.27	(8-40) 23.829
	N	79	79	79
	Std. Deviation	11.790	6.488	6.2418

Abstract AB0917 Table 2. Difference of Vitamin D level in relation to clothing's (ANOVA)

Gender		Sum of Squares	df	Mean Square	F	P value
Female	Between Groups	136.315	3	45.438	1.174	0.325
	Within Groups	2902.568	75	38.701		
	Total	3038.883	78			

Conclusion: Main source of Vitamin D is sunlight. Proper exposure to sunlight is essential for adequate vitamin D level even in a sunny country. Regarding in vitamin D absorption from sunlight, there may be no difference between Burkha and other covered dressings. Further study needed to have a conclusion.

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AB0918 CERVICAL INSTABILITY AND VISUAL PATHWAYS COMPROMISE IN PATIENTS WITH JOINT LAXITY

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Background: Cervical spine stability is to a great extent dependent on the capsular ligaments, laxity of which would lead to extensive movements of the vertebrae. This instability of the cervical spine, particularly in the upper segments (C0-C2) would be a major source of vertebrobasilar insufficiency. The resultant brain posterior circulation compromise would then make the foundation of white matter changes and cause many neurological signs and symptoms. Occipital lobe and visual pathways are certainly in danger in these circumstances. How and to what extent could the visual pathways be involved in patients with joint laxity is not well studied yet.

Objectives: This study was designed to find whether the visual evoked potential parameters (latency and amplitude) of the patients with generalized joint laxity differs from that of the normal population.

Methods: In this cross-sectional comparative study, 90 consecutive patients with generalized lax joints and 90 normal individuals were enrolled and underwent the visual evoked potential test by pattern reversal. The latency and amplitude of P100 were determined for all the participants and data from the 2 groups were compared statistically.

Results: The results demonstrated that although none of the VEP parameters fell in the abnormal range, there was significant difference between P100 latency in patients with generalized lax joints (mean:110.23 ms) versus normal population (100.18 ms) ($P < 0.001$) with longer latency in patients with generalized lax joints. But the amplitude was not significantly differed across the groups ($P > 0.05$).

Conclusion: It can be concluded from this study that although the VEP parameters of the patients with generalized joint laxity don't exceed the normal range limits, P100 latency in these patients is significantly more prolonged than in normal population. This finding is valuable from two points of view, first P100 latency at the verge of abnormality (upper limit of normal range) in these patients is a warning sign implying the visual pathway involvement, and second VEP could be invaluable in differentiating the signs and symptoms that are produced by vertebrobasilar insufficiency secondary to the joint laxity from multiple sclerosis, which can be mimicked both clinically and in MRI findings by many vascular problems but shows a great percent of VEP abnormality as a particular feature.

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AB0919

EFFECTS OF ALEXITHYMIA ON ACTIVITY PAIN, UPPER EXTREMITY FUNCTION, SYMPTOM AND DEPRESSION LEVELS IN PATIENTS WITH THORACIC OUTLET SYNDROME

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Background: Presentation of the most common changes in the thoracic outlet syndrome causing functional disorders of the upper limb (1). The majority of the studies published on TOS highlight physiotherapy strengthening exercises and postural reeducational drills as being the mainstay of any conservative management programme for TOS (2). However, in the literature, the effect of emotional state on progression in treatment programs has not been investigated. Alexithymia, which refers to deficiencies in the self-awareness of emotional states, has been reported to be associated with poor ability in various aspects of social cognition (3). The ability of TOS patients to express themselves and their emotions will affect the success of the treatment.

Objectives: The aim of this study was to investigate the effect of alexithymia on upper extremity functions, symptoms, pain level, depression and anxiety in patient with Thoracic Outlet Syndrome.

Methods: Forty-three TOS patients (36.67±13.99 years; 38 women, 5 men) were enrolled to the study. Alexithymia was assessed with Toronto Alexithymia Scale (TAS-20). The patients were divided into two groups as non-alexithymia group and alexithymia group according to 51 points TAS -20 cut-off score. Pain levels at rest and activity were assessed with visual analogue scale; upper extremity function was assessed with Disabilities of the Arm, Shoulder, and Hand (DASH) questionnaire, and upper extremity symptom was assessed with using Servical Brachial Symptom Questionnaire. Mann-Whitney U test was used for data analyses.

Results: Activity pain level and depression in alexithymia group was higher than the non-alexithymia group, $p=0.008$ and $p=0.007$, respectively. Also, functional level and symptoms were worst in alexithymia patients, $p=0.041$ and $p=0.05$, respectively. No difference was found between groups in anxiety and resting pain level ($p>0.05$).

Conclusion: Thoracic outlet syndrome patients who have alexithymia show worse pain, symptoms, function, and depression. Emotion should be considered in physiotherapy programs. Because the progression of alexithymia patients are worst than non-alexithymia patients.

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AB0920

THE EFFECT OF TIBIALIS POSTERIOR MUSCLE FATIGUE PROTOCOL ON THE STATIC AND DYNAMIC FOOT PARAMETERS

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Background: The tibialis posterior has a important key role as an inverter of the rearfoot. Also providing dynamic support across the midfoot. The value of the tibialis posterior shown by biomechanical research conducted on patients with posterior tibialis tendon dysfunction. One method

of assessing a muscle's contribution to a specific movement pattern is via fatigue-inducing exercise of that muscle. Consequently, to realize the role of tibialis posterior fatigue on foot mechanics it seems prudent to use an exercise that more selectively activates this muscle (1,2).

Objectives: The purpose of this study is to investigate dynamic and static foot parameters changed by tibialis posterior muscle fatigue protocol.

Methods: Thirty patients were participated in this study. Socio-dermo-graphic and descriptive characteristics of the participants were recorded. The changes on the dynamic and static parameters of foot were measured by pedobarography. The two exercises selected for the fatigue protocol are: 1-Unilateral heel raise 2-Close chain resisted foot adduction. Fatigue level was measured by Borg scale. Static and dynamic parameters obtained before and after fatigue protocol were compared.

Results: The mean age of the patients was 24.88 ± 4.39 years, mean height was 171 ± 7.89 cm and mean weight was 68.7 ± 14.5 kg. We found significant increase in the maximum pressure measurement of mid foot ($p=0.004$). In the total contact area during the static position, there were no significant changes ($p>0.05$). Participants' maximal pressure in the middle standing phase was changed from 19.78 ± 10.71 N/cm² to 22.89 ± 13.03 N/cm² after fatigue protocol in medial of middle foot ($p=0.03$).

Conclusion: According to the results, there was a correlation between the fatigue of tibialis posterior and the static and dynamic parameters of foot. The increase in the middle foot peak pressure distributions after the fatigue protocol of the tibialis posterior muscle can be explained as the increase of the angular amount of pronation and prolongation of the time with the middle standing phase. Increase in pressure forces of the middle foot and increase in percentages of the area cause increase of the weight in the front foot during the gait cycle. Thus, fatigue protocol causes similar effects as tibialis posterior muscle dysfunction.

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Paediatric rheumatology

AB0921

JUVENILE-ONSET LUPUS WITH SECONDARY CMV-INDUCED MACROPHAGE ACTIVATION SYNDROME (CASE REPORT)

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Background: Juvenile-onset lupus (JSLE) is a complex illness with an aggressive course and higher chances of morbidities and mortality. JSLE is extremely rare before the age of 5 years. A sole disease criterion may precede long time before others, making diagnosis rather challenging

Objectives: Identifying JSLE and its subsequent complications

Methods: A three and half years old female patient presented with an established diagnosis of idiopathic thrombocytopenia (ITP) of one year duration. One month ago, the patient developed an acute onset of high grade persistent fever, bilateral knee swelling and significant weight loss.

Results: On physical examination, patient was emaciated and pale with multiple ecchymotic patches all over her body. Vital data showed normal blood pressure and apical heart rate ranges for age. Systemic examination revealed multiple oral ulcers, hepatosplenomegaly, bilateral knee arthritis and bilateral below knee painless pitting lower limb edema. Neurological examination was free. Laboratory evaluation showed a CBC with TLC $1.800/\text{mm}^3$ NE $0.5/\text{mm}^3$, HB 7.9 gm/dl, PLT $79 \times 10^3/\mu\text{L}$, ESR 120 mm/1st hr and CRP 96 mg/dl. Routine chemistry showed elevated liver enzymes (ALT 137 IU/L & AST 280 IU/L), LDH 960 U/L, serum albumin 2.5 g/dl, normal renal functions. The history of chronic ITP together with evolution of other autoimmune manifestations raised the suspicion of an underlying Connective tissue disorder. Immunological profile showed positive immune markers (ANA 1/320 speckled and positive Anti-DNA), positive lupus anticoagulant and anticardiolipin IgM, C3 was consumed (49 mg/dl). Secondary Macrophage activation syndrome (MAS)