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AB1072 THE DEVELOPMENT OF ULTRASOUND SEMIOTICS OF DEFEATS OF THE JOINTS IN RHEUMATOID ARTHRITIS

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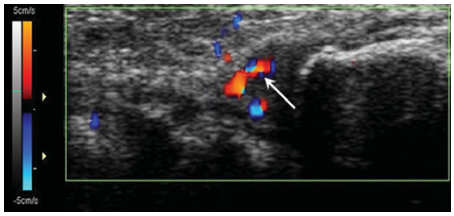
Background: Differential diagnosis of rheumatoid arthritis today is challenging in cases of atypical clinical and laboratory picture arthritis [1]. Often the use of standard x-ray is not informative for the first two years of the disease. Erosive joint damage detected by the standard X-ray only after 2 years from the onset of the disease and only 36% of cases (M. Bukhari [et al., 2001), while the degree of articular destruction progresses with time and is correlated with a decrease in joint function.
Objectives: Development ultrasound semiotics for the diagnosis of rheumatoid arthritis using ultrasonic method of investigation of the joints.
Methods: We studied 113 patients with RA and 30 with no articular pathology – a control group (CG).
In the group of patients with RA - 88 people were women (79,7%), 35 people (20,3%) were men; the median age was 40.3 years (33–46), and the median duration of current RA – 4 years (1,75–10).
The diagnosis of RA was established according to modified ACR criteria of 1987. The activity of the inflammatory process of the I degree was 19 (27,5%) patients, II – 36 (52,2%), III in 14 (20.3%).
The control group was the patients medical history and clinically at the time of inspection there was no symptoms of the joints. Among them 15 men (50%) and 15 women (50%). The median age in the CG was 38.5 years (33–48).
All patients were multiplescale dynamic study II, V metacarpophalangeal and wrist joints by the ultrasonic device expert class using a sensor with a frequency of 12 MHz.
Results: Patients from the control group by ultrasound examination of the joints, we visualized the articular surfaces of the bones in the form of hyperechoic structures with clear smooth contours, homogeneous echostructure; the synovium is not visualised or she had homogeneous echostructure and a thickness of not more than 2.9 mm; the tendon was determined in the form of a hyperechogenic bundle, of a thickness not exceeding 1.5 mm.
Patients with RA identified the following ultrasound signs of lesions of the joints: focal pannus (96,6%) - area of pathologically altered synovial membrane thickness of more than 3 mm with a "tumor-like" invasive growth and the presence of pathological vascularization (indirect signs of neoangiogenesis) detected when using Doppler on the erosion pannus; thinning synovia outside erosion (99%); erosion, pannus (99%); combined erosion (96%); the erosion of inflammation: acute (45.6%) and chronic (89%); moderate synovitis (89,4%); swelling of periarticular soft tissues (88,4%); tenosynovitis (67,6%); periarticular effusion (66,9%); positive "pain test" in 6% of cases under ultrasound control.



Conclusions: Given the results obtained, we have developed ultrasonic diagnostic criteria of RA.
Diagnostic criteria for rheumatoid arthritis:
1. Pannus with pathological vascularization;
2. Thinning synovia outside of the pannus;
3. Erosion of the articular surface of the bone (pannus, associated erosion/erosion inflammation);
4. Moderate synovitis;
5. Tenosynovitis;
6. Periarticular swelling/effusion.

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AB1073 D-DIMER AS AN EARLY MARKER IN PATIENTS WITH LUPUS MESENTERIC VASCULITIS

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Background: Gastrointestinal manifestations are common in systemic lupus erythematosus (SLE) patients. Lupus mesenteric vasculitis (LMV) is a major cause of acute abdominal pain in SLE patients. No early serum marker contributes to the diagnosis of lupus mesenteric vasculitis.
Objectives: The aim of this study was to investigate clinical significance of serum D-dimer level as an early diagnosis marker of LMV patients.
Methods: The 57 systemic lupus erythematosus patients were retrospectively analyzed and classified into LMV group (n=19) and Non-LMV group (n=38) between May 2010 and January 2016. The serum D-dimer level was measured on the first day after SLE patients presented acute abdomen as well as imaging, other laboratory-testing parameters, and SLEDAI during the same period. The maximum and mean D-dimer values were analyzed and compared with other potential markers for diagnosis of LMV. The correlation of D-dimer level with other potential severity markers and inflammation parameters were also studied.
Results: Both maximum and mean D-dimer level on the first day of presentation of acute abdomen were significantly higher in LMV patients. The D-dimer level was correlated well with L-lactate and SLEDAI. In addition, D-dimer level was detected poor correlation with white blood cell count and C-reactive protein level.
Conclusions: D-dimer level could be an effective and early serum diagnosis marker of LMV.

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AB1074 THE TYPES OF EROSIVE LESIONS OF JOINTS IN RHEUMATOID ARTHRITIS

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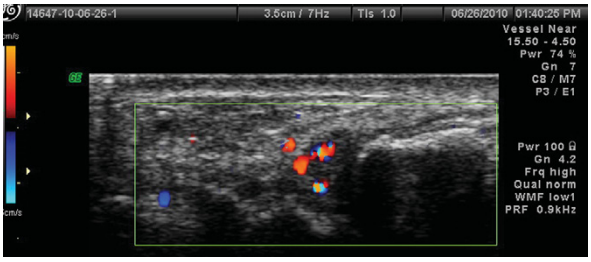
Background: Early diagnosis of erosive lesions in rheumatoid arthritis (RA) remains today an important task, especially in the absence of specific laboratory markers. Promising research aimed at studying the informative instrumental diagnostic methods (ultrasound, Rg, MRI) to identify the characteristics of erosive joint damage in patients with RA [1].
Objectives: To study diagnostic possibilities of instrumental methods to identify the species of erosive joint damage in patients with RA.
Methods: We examined 104 patients with RA. Among patients of the 1st group were women 81 (77.9%), men - 23 (22,1%), average age was 38±12.1 years. Diagnosis of rheumatoid arthritis was exhibited with the EULAR diagnostic criteria [2] and the ACR [3]. All patients were Rg-graphy, ultrasound and MRI of the hands. Statistical processing of the information package.
Results: Erosive lesion of joints at RA is presented by the proliferation-caused erosion (erosion of the pannus) in combination with the development of the focal pannus with vascularization and inflammatory-destructive erosion (true erosion inflammation) outside the pannus (image 1). In the study the true erosion of inflammation of the articular surface of the bone ultrasound method identified at 87.9% of the joints in RA, significantly higher ($p<0,0001$) than in 34% of the joints in Rg-study; erosion pannus identified in 99.2% of the joints in patients with RA by means of ultrasonography, was significantly higher ($p<0,0001$) than 24.3% of the joints in the Rg-study. So erosion from the focal invasive growth of pannus, associated erosion, erosion, acute and chronic inflammation of the articular surface of the bone in patients with RA by ultrasonography were visualized significantly more often ($p<0,0001$) than in Rg, which allowed to define only the fact of presence of erosive lesions of the joints, but not allowed to determine the erosive lesions. The sensitivity of ultrasound accounted for 97.9% (95% CI: 97,7–98,1%); specificity - of 95.7% (95% CI: of 95.5–95.9 per cent). And in Rtg-graphy sensitivity accounted for 55.3% (95% CI: 54,8–55,8%); the specificity - of 87.7% (95% CI: 87,4–88%).



Conclusions: When comparing the results of a comprehensive study of joints in patients with RA despite the fact that Rg and MRI allow us to visualize and measure bone structure and pathology, ultrasound is only allowed to identify two types of erosive lesions of the joints: the true erosion inflammation and erosion of the pannus.

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Public health, health services research and health economics

AB1075 PHYSICIAN POSTGRADUATE EXPERIENCE HAS A PREDICTIVE ROLE FOR PHYSICIAN EFFICIENCY INDEX REGARDING PATIENTS WITH RHEUMATOID ARTHRITIS: A COHORT, EXPLORATORY STUDY

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Background: Much effort has been made to improve the efficiency of health care system by delivering cost-effective, high-quality care.Nurse staffing's contribution to daily practice plays a significant role to reach this goal.[1]
Objectives: To elucidate the differences between ratios of nurse/physician consultation as well as physician efficiency index (PEI) of senior rheumatologists and junior physicians in rheumatology residency training regarding patients with Rheumatoid Arthritis (RA).In addition, to delineate the correlation of physician postgraduate experience and PEI.
Methods: The mean intervals between standard consultation by a physician or nurse for all senior rheumatologists and junior physicians as well as nurse/physician visits ratio and PEI (= nurse/physician visits ratio * mean interval), regrading RA patients seen during Nov 2013–2015, were calculated. Multiple linear regression analysis was performed to delineate the relationship between physician postgraduate experience and PEI. To monitor treatment outcome, Disease Activity Score in 28 joints-C-reactive Protein (DAS28-CRP) and Health Assessment Questionnaire (HAQ) were consecutively measured three times: first at physician consultation, second at following nurse consultation and third either at a nurse or physician consultation.

Table 1

Physicians	Number of patients**	DAS28 at baseline	Interval (day) ±SD	Nurse/Physician visits ratio	Physician efficiency index	Physician postgraduate experience (year)
P1*	244	4.8±1.2	126.9±85.1	(604/617)0.98	124.2	29
P2*	183	4.4±1.2	133.1±105.3	(207/384)0.54	71.7	20
P3*	129	4.5±1.3	114.5±85.2	(96/309)0.31	35.6	11
P4*	97	4.4±1.0	84.8±83.3	(133/252)0.53	44.8	10
P5	37	3.8±1.2	118.5±78.4	(15/52)0.29	34.2	9
P6	51	4.3±1.2	138±102	(5/68)0.07	10.1	8
P7	60	4.4±1.4	194.2±86.3	(14/103)0.14	26.4	8
P8	29	4.4±1.3	114.8±78.4	(14/41)0.34	39.2	7
P9	39	4.1±1.2	159.2±105.5	(14/53)0.26	42.0	7
P10	15	4.6±1.4	179.1±115.1	(1/16)0.06	11.2	6
P11	25	4.2±1.2	0	(0/24)0	–	3

P1–P4*: Specialists in rheumatology (n=4), P5–P11: junior physicians in rheumatology residency training (n=7). **Some of patients had consultation with more than one physician. DAS28:Disease Activity Score in 28 joints.

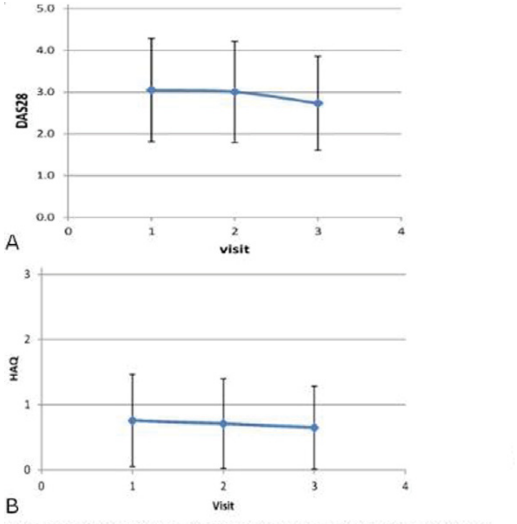

Fig 1. A: Curve of the means of Disease Activity Score in 28 joints ± Standard Deviation at first (by physicians, 3.05±1.24), second (by nurses, 3.01±1.21) and third (by physician or nurse, 2,73±1.13) visits and B: Curve of the means of Health Assessment Questionnaire scores ± Standard Deviation at first (by physicians, 0.759±0.707), second (by nurses, 0.709±0.686) and third (by physician or nurse, 0.649±0.634) visits.

Results: 3699 visits, belonged to 672 RA patients (64.1% female, the mean of age 64.9±14.1 and DAS28 at baseline 4.5±1.2), were included. There was a significant difference between the nurse/physician visits ratios of senior rheumatologists and junior physicians (P=0.01). Additionally, the mean PEI of senior rheumatologists was significantly higher than of junior physicians (P=0.04) (Table 1). A positive correlation was found between physician postgraduate experience and PEI adjusted for DAS28 at baseline and number of patients for each physician (Regression coefficient (95% Confidence Interval): 5.427 (1.068–9.787), P=0.022). DAS28 and HAQ score were significantly decreased if physician visits were followed by nurse visits (P=0.004 for DAS28 and P=0.025 for HAQ) (Fig.1), indicating a good treatment outcome at nurse consultations.
Conclusions: Junior physicians should be supervised to delegate responsibilities to nurse staffing. So, entire department operates more efficient, leading to prevent extra expenses (due to the differences in yearly salary of physicians and nurses). Quality of care should be monitored continuously by markers of disease activity and CRP.

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AB1076 LOW BACK PAIN IN TURKISH BUS DRIVERS: PILOT STUDY

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Background: Lowback pain is a common problem whichincreasefinancialburden of government (1).The incidence of back pain that can be seen in every part of society is also high in drivers (2). We haven't seen any investigation about low back pain of Turkish drivers in literature. We thought that it should be research because of changeable ethnic differences.
Objectives: The aim of our study was to determine the rate of lowback pain and it'srelationshipbetweenquality of life in drivers.
Methods: Intercity and municipalitydriversof Istanbul and Yalova, participated in our study.Itwasdesigned as cross-sectional and complementarytype. Inclusion-criteriawerevolunteerforthis study and driving at least eight hours per day, being a driver for at least three years. Those with congenital deformities, having an accident history and doing an additional job were excluded from this study. After getting drivers' demographic data, "Oswestry Low Back Disability Questionnaire" forlowback pain and "Nottingham Health Profile" forhealthquality of life weresurveyedface to face. Chi-square and Spearman'scorelationnon-parametric test in the SPSS statistics programwereusedforstatistical analysis in this study.
Results: All of the 261 people who participated in this study were male. Their mean of age, weekly working hours and working year were 43±9.28, 50±13.09 and 18±1.04, respectively. %50 of participantshavelowback pain and those of 43%reported that jobsatisfactionwasaffecteddue to pain. Itwasdetermined that 10% of participants, whosejobsatisfactionwereaffected, didn't tapply the medical-doctor. While there was a significant relationship between low back pain and quality of life (p=0.000); there was no relationship between these two parameters and age and working year (p>0.05). It was determined that applying to medical doctor (p=0.02) and drug use rate (p=0.015) increased if the painful period lasted longer.
Conclusions: Low back pain affects quality of life related to health status. In this study, it was seen that the incidence of low back pain was high in long-distance drivers and affected job satisfaction in a great way. We think that the rates of drug use and medication usage can be reduced by increasing leisure time activity before increasing the severity of back pain and lengthening painful period. In addition, half of this occupation group is influenced by low back pain and once again it has been shown that waist schools should be expanded in our country.

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