AB0791

THE DIAGNOSIS VALUE OF SYNOVIAL FLUID LYMPHOCYTE IN GOUT PATIENTS

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Background: Synovial fluid cell counts have long been recognised to have utility in the diagnosis and management of arthritis. Few studies have explained the diagnosis value of synovial fluid cell counts in gout patients.

Objectives: The study aims to investigate the diagnosis value of synovial fluid cell counts in gout patients.

Methods: A total of 185 gout, 64 rheumatoid arthritis(RA), 26 axial spondyloarthritis(axSpA) and 24 osteoarthritis(OA) patients were included into the study. According to serum uric acid(sUA) level on attack, gout patients were divided into normal sUA gout patients and high sUA gout patients. The laboratory data was recorded and ROC curve was performed.

Results: The synovial fluid WBC, PBMC, monocyte, PMN and neutrophil in gout patients were higher than OA patients ($P<0.05$). The synovial fluid PBMC and lymphocyte in gout patients were lower than RA and axSpA patients ($P<0.05$). Compared with RA, axSpA and OA patients, ROC curve showed that the AUC value of lymphocyte and sUA for gout were 0.728 and 0.881, which were higher than other variables. The optimal cut off value of lymphocyte for gout was 1.362, with sensitivity of 83.3% and specificity of 60.6%. The AUC value of lymphocyte and sUA for normal sUA gout patients were 0.694 and 0.643, which were higher than other variables. The optimal cut off value of lymphocyte for normal sUA gout patients was 1.362, with sensitivity of 81.6% and specificity of 60.6%.

Conclusion: Synovial fluid cell counts of gout patients were different from RA, axSpA, and OA patients. Synovial fluid lymphocyte had a higher diagnosis value for gout.

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Table 1. Basic characteristics of the participants

	Gout(n=185)	RA(n=64)	axSpA (n=26)	OA(n=24)	P value
Age (years)	48.58±15.58	56.19±12.39 [*]	32.96±15.19 ^{##}	69.63±12.43 ^{***}	<0.001
Gender (male/female)	176/9	11/53	21/5	8/16	<0.001
WBC($\times 10^9/L$)	18.58±22.94	22.24±20.87	15.52±15.03	3.03±5.59 ^{##}	0.002
PBMC($\times 10^9/L$)	1.85±1.99	3.68±2.43 [*]	3.85±3.34 [*]	0.74±1.01 ^{##}	<0.001
Monocyte($\times 10^9/L$)	1.02±1.59	1.24±1.11	1.34±1.52	0.29±0.37 ^{##}	0.030
PMN($\times 10^9/L$)	16.77±21.51	18.57±19.32	15.75±24.17	2.30±5.00 ^{##}	0.008
Lymphocyte ($\times 10^9/L$)	0.80±0.83	2.43±1.76 [*]	2.50±2.04 [*]	0.45±0.80 ^{##}	<0.001
Eosinophil ($\times 10^9/L$)	1.32±3.75	0.56±0.93	0.11±0.17	0.49±1.85	0.098
Neutrophil ($\times 10^9/L$)	16.42±21.16	18.82±20.89	11.13±14.23	2.23±4.87 ^{##}	0.003
UA(μM)	497.92±132.24	299.31±97.91 [*]	351.81±118.93 [*]	333.38±75.19 [*]	<0.001
ESR(mm/h)	61.02±37.68	82.42±32.87 [*]	68.12±36.25	42.34±35.91 ^{##}	<0.001
CRP(mg/L)	56.52±45.64	44.01±35.27 [*]	65.49±39.85 [*]	22.11±40.65 ^{##}	<0.001

^{*} $P<0.05$ vs gout group, ^{##} $P<0.05$ vs RA group, ^{###} $P<0.05$ vs axSpA group

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AB0792

IMAGING METHODS IN PREDICTING A RADIOLOGIC PROGRESSION IN RA

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Background: Rheumatoid arthritis (RA) is the chronic inflammatory joint disease, and it is responsible for structural damage. Several studies have shown that ACPA + patients were more likely than ACPA- patients to develop erosive changes on radiography. Ultrasound (US) is a well-established method of diagnosis and follow-up in RA, which at the moment may have a prognostic value in assessing the outcomes of the disease.

Objectives: to identify the prognostic role of US in radiologic progression in RA patients.

Methods: 85 RA pts, mean age 53.0 [44.0; 61.0] yrs, mean disease duration 8 [4; 24] months were treated with MTX and biologics according to Treat-To-Target concept. Among them 56 patients with early RA, mean age 53.5 [45.5; 61.0], disease duration 5 [3; 7.5] months. Hands and feet ultrasound (US) with gray scale (GS), power Doppler (PD) and destructive changes (erosion), according to the criteria of OMERACT, were analyzed before initiation of treatment and in 3, 6, 9 and 12 months after. A binary scoring system (presence/absence of erosions) of the joints examined was used. Radiographs were obtained at baseline and 4 years, radiographic changes were assessed using Sharp/van der Heijde

modified scoring method. Radiographic progression was documented based on Sharp/Van der Heijde modified score changes during the follow up.

Results: 71 ACPA+ (84%) and 14 ACPA- (16%) patients presented among the 85 patients with RA, among them 49 ACPA+ (87%) and 7 ACPA- (13%) with early RA. RA progression by 4 years the follow-up period was identified in 39% of pts.

During the follow-up period 33 of 85 patients had radiographic progression: the count of erosion increased from 0 [0; 3] to 2 [0; 6]. At the same time, on the background of therapy, a decrease in ultrasound signs of inflammation was determined according to the GS and PD: from 6 [4; 9] to 1 [0; 2] $p = 0.000$ and from 2 [1; 6] to 0 [0; 1] $p = 0.000$, respectively, and increase in the number of joints with erosions (from 1 [0; 2] to 2 [0; 4], $p = 0.000$).

In the group with early RA, the changes were similar.

In ACPA+ general group the count of erosion at 4 years was significantly higher than in ACPA- general group (3 [0; 7] and 0 [0; 1], respectively, $p=0.0026$).

In ACPA+ early RA group the number of joints with erosions by US at baseline was significantly higher than in ACPA- early RA group (1 [0; 1] and 0 [0; 0], respectively, $p=0.017$). In ACPA+ early RA group the count of erosion at 4 years was significantly higher than in ACPA- early RA group (2 [0; 4] and 0 [0; 0], respectively, $p=0.009$) (Table 1)

Table 1. Characteristic of the groups (general group)

at baseline	ACPA+(71 pts)	ACPA- (14 pts)	p
The number of joints with erosions by US	1 [0; 2]	0 [0; 1]	0,36
The number of erosions by X-ray	1 [0; 4]	0 [0; 1]	0,06
after 4 years follow up			
The number of joints with erosions by US	2 [0; 4]	1 [0; 2]	0,16
The number of erosions by X-ray	3 [0; 7]	0 [0; 1]	0,0026
Characteristic of the groups (early RA group)			
at baseline	ACPA+(49 pts)	ACPA- (7 pts)	p
The number of joints with erosions by US	1 [0; 1]	0 [0; 0]	0,017
The number of erosions by X-ray	0 [0; 2]	0 [0; 0]	0,11
after 4 years follow up			
The number of joints with erosions by US	2 [0; 3]	1 [0; 1]	0,22
The number of erosions by X-ray	2 [0; 4]	0 [0; 0]	0,009

Conclusion: Thus, in early RA is advisable to perform an US of the hands and feet to select a group of patients with potentially rapid radiological progression. US evaluation of patients with non-early stage RA is not very important for assessing the prognosis.

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AB0793

CONTRIBUTION OF INVESTIGATIONS FOR THE QUEST OF PRIMITIVE CANCER IN FRONT OF BONE METASTASIS

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Background: Bone metastases (OM) or secondary cancers bones are bony locations of tumor cells, away from a primary malignant tumor. The Bone metastases are the most common metastases. They can be revealing in 20 to 30% cases or complicate the course of a known cancer. The bone metastases are a pejorative prognostic factor.

Objectives: The aim of this study was to identify the Contribution of diagnostic methods for the quest of primitive cancer in presence of bone metastasis.

Methods: We conduct a retrospective study of 35 files of patients who were hospitalized in the rheumatology department. All patients underwent a questionnaire and a clinical examination. Additional radiological assessment, bone biopsies, biopsies of other sites, bone scintigraphy and tumor markers were carried out on a case-by-case basis.

Results: Thirty-five cases (25 men and 10 women) were analysed. The average age was 61 years [45-85]. Seven patients had a known history of neoplasia. One or more bone biopsies were performed in 8 cases. The vertebrae were the most biopsied bone site (6 cases). The bone biopsies were in favour of carcinoma (3 cases), adenocarcinoma (2 cases), squamous cell carcinoma (1 case) and inconclusive (2 cases). Non bony biopsies (2 pulmonary, 2 prostatic, 1 mammary) concluded to an adenocarcinoma (3 cases) and a carcinoma (2 cases). Bone scintigraphy was carried out in 7 cases and showed in all cases diffuse or localized hyperfixation. The localized value of tumor markers appeared relatively low except for Prostate Specific Antigen (PSA). Other metastatic localisations were identified: hepatic (6 cases) and pulmonary (1 case). The primary cancer identified was pulmonary for 11 patients, prostatic for 7, gynaecological for 4 and digestive for 3. One patient had Otorhinolaryngological cancer and another had bone cancer. Bone biopsy allowed the diagnosis in 6 cases (17%). The primary cancer was discovered by a biopsy of other non-bone sites in 5 cases (14%). Neoplastic antecedents and clinical context were considered sufficient in 16 cases (45%). Primary cancer remained undetermined in 8 cases (22%).

Conclusion: Bone biopsy, as well as non-bone biopsy, remains an essential tool in the etiological diagnosis of bone metastases. They are very contributive in the same proportions. PSA is a major diagnostic asset in the search for primary cancer.

Disclosure of Interests: None declared
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AB0794

CONTRIBUTION OF LABIAL SALIVARY GLAND BIOPSY: EXPERIENCE OF THE DEPARTMENT OF RHEUMATOLOGY OF THE UNIVERSITY HOSPITAL OF IBN ROCHD (ABOUT 57 CASES)

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Background: Labial salivary gland biopsy (LSGB) is a histological examination indicated for the diagnostic workup of systemic diseases such as Sjögren's syndrome, amyloidosis, or sarcoidosis.

Objectives: To study the contribution of LSGB to the diagnosis of Sjögren's syndrome, amyloidosis, and sarcoidosis.

Methods: We conducted a retrospective study of LSGB histopathological reports and clinical data of patient medical records collected in the Department of Rheumatology of the University Hospital of Ibn Rochd, Casablanca, between January 2019 and June 2020. Histology assessed Chisholm and Masson's sialadenitis score, looked for amyloidosis, and sarcoidotic granulomas.

Results: A total of 57 LSGBs were performed, of which 2 were excluded from our study because of lack of clinical data. The sex-ratio M/F was 0.1, and the median age was 53 (22 – 85). The indications were subjective eyes and mouth dryness in 40% of cases, the search for sarcoidosis and amyloidosis in 23.6% of cases, the assessment of a dryness syndrome in the context of chronic inflammatory rheumatism in 18.2% of cases, isolated dryness of the mouth in 14.5% of cases, and the search for amyloidosis in the context of a known primary Sjögren syndrome in 3.6% of cases. The stages of Chisholm and Masson for sialadenitis found were: stage I at 56.6%, stage II at 24.5%, stage III at 11.3%, and stage IV at 7.5%. Among the LSGBs performed for dryness syndrome, stages III and IV were found in 18.2% of cases among subjective eyes and mouth dryness, in 12.5% of cases among isolated mouth dryness, and in 20% of cases among chronic inflammatory rheumatism. Three cases of AA amyloidosis (5.5%) were diagnosed. No sarcoidosis granulomas were found.

Conclusion: LSGB is a simple and frequent investigation. The Chisholm stage most often found in our series was stage I, followed by stages II, III, and IV respectively. This is consistent with the results of the study of Baeteman et al (1). In addition, amyloidosis was only found in our series in 5.5% of cases, also matching with the results of Baeteman et al. (4.2%). Their study showed that LSGB has a great diagnostic interest in these two pathologies, with a sensitivity of 52-75% and a specificity of 90-100% for Sjögren's syndrome, and a sensitivity of 48-80% and a specificity of 93-100% for amyloidosis (2). LSGB remains a simple investigation test, contributing to the diagnosis of Sjögren's syndrome, amyloidosis, and sarcoidosis.

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AB0795

DYNAMIC CHANGES IN QUANTITATIVE INDICES OF BODY COMPOSITION BY DUAL-ENERGY X-RAY ABSORPTIOMETRY IN PATIENTS WITH EARLY RHEUMATOID ARTHRITIS ON DIFFERENT THERAPEUTIC REGIMENS

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Background: A redistribution of body fat (abdominal obesity) is quite common in RA patients. Such parameters as body mass index (BMI) and waist circumference do not distinguish or quantify fat and lean (muscle) mass. For that purpose, dual-energy X-ray absorptiometry (DXA) is usually used.

Objectives: to compare quantitative body composition in patients with early RA at baseline and after 24 weeks of therapy with different regimens.

Methods: The study included 37pts (31 women /6 men) with early RA (ACR/EULAR criteria, 2010), 57 [46.5, 62.0] years old, naïve to treatment with glucocorticoids and disease-modifying anti-rheumatics (DMARDs). Pts were seropositive for IgM RF (76%) and anti-CCP (92%), with highly active RA (DAS28 5.5 [5.1; 6.0]; SDAI 32.4 [22.4; 42], CDAI 29.0 [19.7; 39.5]) scores, and median disease duration of 6.0 [5.5;15.5] months. Methotrexate (MTX) 10 [10-15] mg/week subcutaneously

was initiated in all included patients as first line therapy for 12 weeks. By this time point therapy was reviewed in 19 patients (51%) due to MTX inefficacy and adalimumab (ADA) at 40mg once every 2 weeks was added on top of MTX. DXA scan (HOLOGIC, USA) was used to measure body composition at baseline and after 6mths of treatment with the protocol assessing total body, body fat and lean muscle mass.

Results: Based on therapeutic regimens at week 24 all study subjects were divided into 2 groups: Group I (n=18) receiving MTX monotherapy, Group II (n=19) – the combination of MTX and ADA (Table 1). Group I patients had lower body weight, lean and fat mass vs patients from Group II (62 kg vs. 73.7 kg; 40.6 kg vs. 49.7 kg; 21.0 kg vs. 25.8 kg, respectively (p<0.05 in all cases) at baseline. 24 weeks of combination therapy eventuated in body weight gain (73.7 kg vs. 75.8 kg), accumulation of fat (25.8 kg vs. 28.1 kg) and unchanged lean tissue mass. In contrast, patients on MTX monotherapy managed to increase their lean mass (40.6 kg vs. 41.6 kg) without gaining in total fat mass.

Table 1.

Indices	I group (n=18), monotherapy MT			II group (n=19), combination therapy (MTX, ADA)		
	baseline	24 weeks	Δ, %	baseline	24 weeks	Δ, %
Body fat mass, kg	21,0 [17,2;26,2]**	23,4 [17,5;29,7]	+11	25,8 [18,4;35,0]	28,1 [21,4;37,9]*	+9
Lean mass, kg	40,6 [37,3;44,7]**	41,6 [38,2;46,4]**	+2,5	49,7 [39,0;56,1]	49,9 [41,0;57,6]	0,4
Total mass, kg	62,0 [57,7;77,6]**	64,1 [59,5;81,6]**	+3,4	73,7 [64,5;97,9]	75,8 [66,8;102,1]*	+2,8

*p<0,05 reliability of differences in parameters before treatment and after 6mth (Wilcoxon); **p<0,05 differences in baseline values in groups I and II (Mann-Whitney test);***p<0,05 difference in the indices between the groups by the 6mth of therapy; Δ, % difference in indices between the groups by the 6mth of therapy.

Conclusion: In general, RA patients on treatment tend to gain weight by week 24. Patients who failed on MTX monotherapy by week 24 and were switched to combination therapy had higher fat mass at baseline. Mediations used for RA treatment produce multidirectional effects on quantitative parameters of body composition: MTX monotherapy triggers some increase of lean mass, while combination of MTX and bDMARD results in weight gain and increase of total and fat mass. These data need to be confirmed in large-scale studies with longer follow-up period.

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AB0796

THE EVALUATION OF LUNG DIAGNOSTIC PROCEDURE AT THE ONSET OF INFLAMMATORY RHEUMATIC DISEASES WITH INTERSTITIAL LUNG DISEASE

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Background: Interstitial lung disease (ILD) in inflammatory rheumatic diseases (IRD) is associated with increased mortality. Moreover, the lung is one of the most effected organs on IRD. Consequently, screening methods were required to the detect ILD in IRD.

Objectives: The objective of the following study is to evaluate the diagnostic value of lung function test, chest x-ray and HR-CT of the lung in the detection of ILD at the onset of IRD.

Methods: The study is designed as a case-control study and includes 126 patients with a newly diagnosed IRD. It was matched by gender, age and the performance of lung function test and chest x-ray. The sensitivity and specificity were verified by crosstabs and receiver operating characteristic (ROC) curve analysis. The study cohort was divided in two groups (ILD group: n = 63 and control group: n = 63). If possible, all patients received a lung function test and optional a chest x-ray. Patients with pathological findings in the screening tests (chest x-ray or reduced diffusing capacity for carbon monoxide (DLCO) < 80 %) maintained a high-resolution computer tomography (HR-CT) of the lung. Additionally, an immunological bronchioalveolar lavage was performed in the ILD group as gold standard for the detection of ILD.

Results: The DLCO (< 80 %) revealed a sensitivity of 83.6 % and specificity of 45.8 % for the detection of ILD. Other examined parameter of lung function test showed no sufficient sensitivity as screening test (FVC = Forced Vital Capacity, FEV1 = Forced Expiratory Volume in 1 second, TLC = Total Lung Capacity, TLCO = Transfer factor of the Lung for carbon monoxide). Also, a combination of different parameter did not increase the sensitivity. The sensitivity and specificity of chest x-ray for the verification of ILD was 64.2 % versus 73.6 %. The combination of DLCO (< 80 %) and chest x-ray showed a sensitivity with 95.2 % and specificity with 38.7 %. The highest sensitivity (95.2 %) and specificity (77.4 %) was observed for the combination of DLCO (< 80 %) and HR-CT of the lung.