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AB0862 THE SENSITIVITY OF THE DOUBLE CONTOUR SIGN IN HAND JOINTS WOULD BE BETTER BY THE DORSAL SURFACE EXAMINATION

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Objectives: To compare the prevalence of ultrasonographic gout specific sign double contour between the dorsal and palmar surfaces of the hand joints.

Methods: This is a cross-sectional study which includes 15 patients with chronic gout, defined according to the American College of Rheumatology criteria (ACR 1977). Ultrasound (US) examination was performed using a high-frequency linear probe (Toshiba Xario[®], frequency (8–14 MHz)) in B and Doppler modes. 560 articular sites were studied at their dorsal and palmar surfaces. We compared the prevalence of the hyperechoic band over the superficial margin of the articular cartilage described as a double contour (DC) between the dorsal and palmar surfaces at each site studied.

Results: The mean age at onset was 54.7 \pm 12.6 years, and the median diagnosis duration was 0 (0.3) years.

The results of the US examination are summarized in Table 1

Table 1. comparison of double contour prevalence between the dorsal and palmar surfaces of wrist, MCP, PIP and DIP joints in the studied population

Joints (N=540)	Dorsal surface (%)	Palmar surface (%)	P
Wrist joints (N=120)	12,6	7,3	<0.001
Radiocarpal (N=30)	20	6,7	0,6
Ulnocarpal (N=30)	13,3	6,7	0,01
Scaphotrapezial (N=30)	3,3	13,3	0,8
Trapeziometacarpal (N=30)	13,3	3,3	0,1
MCP (N=150)	8	6,6	<0.001
MCP 1 (N=30)	3,3	10	0,1
MCP 2 (N=30)	13,3	6,7	0,014
MCP 3 (N=30)	6,7	6,7	0,002
MCP 4 (N=30)	6,7	0	<0.001
MCP 5 (N=30)	10	10	<0.001
PIP (N=150)	4	7,3	<0.001
IP (N=30)	3,3	10	0,1
PIP 2 (N=30)	6,7	3,3	0,9
PIP 3 (N=30)	6,7	13,3	0,01
PIP 4 (N=30)	3,3	10	0,1
PIP 5 (N=30)	0	0	<0.001
DIP (N=120)	0,8	3,3	0,033
DIP 2 (N=30)	0	0	<0.001
DIP 3 (N=30)	3,3	3,3	0,002
DIP 4 (N=30)	0	3,3	<0.001
DIP 5 (N=30)	0	6,7	<0.001

Conclusions: Our study suggests that globally, DC predilect significantly in dorsal than in palmar surfaces of hand joints. These results should be verified on a larger population.

Disclosure of Interest: None declared

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AB0863 THE POPLITEUS GROOVE IN THE LATERAL FEMORAL CONDYLE: A SHELTER FOR MONOSODIUM URATE CRYSTALS?

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Background: Gout is a crystal related arthropathy characterized by deposition of monosodium urate (MSU) crystals at articular and periarticular structures. Ultrasound (US) has gained an important role in the diagnosis of gout due to its capability to clearly detect various expressions of MSU crystal depositions in joints, tendons and bursae [1]. The popliteus tendon inserts in a depression on the outer side of the lateral femoral condyle. It has a close connection to the lateral meniscus and is surrounded by the popliteal recess which is in direct communication with the knee joint cavity [2].

Objectives: To evaluate the prevalence of US findings indicative of MSU crystal deposition at the popliteus groove in patients with gout.

Methods: Consecutive patients with gout, diagnosed according to the 2015 ACR/EULAR criteria, and disease controls diagnosed according to the corresponding diagnostic/classification criteria were enrolled. All the patients underwent a bilateral US examination (carried out using a Logiq 9 US system working with a linear probe operating at 15 MHz) at the popliteus groove level. The US examination was performed with the patient lying supine on the examination bed. A knee flexion of approximately 45° was necessary to visualize the popliteus groove in the lateral aspect of the femoral condyle just deep to the proximal part of the lateral collateral ligament. The following US abnormalities indicative of MSU crystal depositions were evaluated: isolated shining dots, aggregates (heterogeneous hyperechoic foci that maintain their persistent high degree of reflectivity which occasionally may generate posterior acoustic shadow) and tophi (inhomogeneous hyperechoic/hypoechoic material surrounded by a small anechoic rim which may generate posterior acoustic shadows).

Results: We enrolled 17 patients with gout and 22 disease controls: 9 calcium pyrophosphate deposition disease (CPPD), 8 rheumatoid arthritis and 5 psoriatic arthritis. A total 78 popliteus groove were examined by US. US findings indicative of MSU crystal deposition were detected in at least one knee in 13 out of 17 gout patients (76.5%) and in 7 out of 22 controls (31.8%). Table 1 shows the prevalence of the US abnormalities indicative of MSU crystal deposition in the two groups. Six out of the 10 US abnormalities (60%) found in controls were detected in CPPD patients.

Table 1

	Gout	Controls
Patients	17	22
Popliteus grooves assessed by US	34	44
Popliteus grooves "positive" for US findings indicative of MSU crystal depositions	23 out of 34 (67.6%)	10 out of 44 (22.7%)
Isolated shining dots	9 out of 23 (39.1%)	8 out of 10 (80%)
Aggregates	8 out of 23 (34.8%)	2 out of 10 (20%)
Tophi	6 out of 23 (26.1%)	0 (0%)

Conclusions: These preliminary results suggest that the popliteus groove could be regarded as a sentinel area for detecting MSU crystals. These findings should lead to further investigations aimed at identifying the factors and associated with MSU crystals deposition at popliteus groove level.

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AB0864 SENSITIVITY AND SPECIFICITY OF SONOGRAPHIC DETECTION OF URATE CRYSTAL DEPOSITS IN HYALINE CARTILAGE IN PATIENTS WITH GOUT IN YEARLY STAGE

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Background: In some cases differential diagnosis between yearly gouty arthritis and other types of arthritis is very difficult. In 2015 the sonographic detection of urate crystal deposits in hyaline cartilage as a new criterion was included in set of classification criteria of gout [1]. But diagnostic value of that ultrasound marker in first month of disease is underinvestigated.

Objectives: To investigate sensitivity and specificity of sonographic detection of gouty hyperechoic deposits in hyaline cartilage in patients with gout in comparison with other signs of gout in debut of arthritis.

Methods: The 104 patients with yearly arthritis (duration of symptoms less