FRI0578 INCREASED VEIN WALL THICKNESS IN BEHÇET'S SYNDROME

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Background: Lower extremity vein thrombosis (LEVT) is the key feature of vascular involvement in Behçet's syndrome (BS). Vein wall thickness (VWT) is proposed to be a surrogate marker of venous disease. A pilot MR study done in 7 BS patients and controls, had demonstrated increased VWT and signal enhancement in the lower extremity veins of BS patients without vascular disease.¹ Another study, using USG, found that VWT was increased among BS patients without vascular disease compared to patients with ankylosing spondylitis and healthy controls.²

Objectives: We reassessed VWT in proximal lower extremity veins in BS patients with LEVT and suitable controls in a formal, masked protocol.

Methods: We studied 47 (40 M/ 7 F) BS patients with LEVT, 50 (43 M/ 7 F) BS patients without any vascular involvement and 38 (31 M/ 7 F) age and gender matched apparently healthy controls. Two independent radiologists, blinded to the diagnosis of BS, used USG to measure VWT of common femoral vein (CFV), superficial femoral vein (SFV) and vena saphena magna (VSM) in both legs.

Results: As shown in table 1, mean age at disease onset and the disease duration were similar between BS study groups. The mean age at thrombosis onset of the patients with LEVT was 26.4±5.8 years. There was good concordance between the 2 observers (kappa: 0.9) The mean VWT was significantly increased among both BS patients with LEVT and those without any vascular involvement when compared to the healthy controls while those with LEVT had the thickest veins.

Abstract FRI0578 – Table 1. Disease duration and VWT

	BS with vascular involvement (n=47; 40 M/ 7 F)	BS without vascular involvement (n=50; 43 M/ 7 F)	Healthy controls (n=38; 31 M/ 7 F)	P value
Age, years	37.06±5.26	36.98±4.47	34.87±7.22	0.296
Disease duration	10.96±6.45	9.68±5.89	-	0.310
Vein wall thickness, mean±SD, mm				
Right CFV 1 st observer	0.91±0.67	0.69±0.15	0.57±0.11	0.001
Right CFV 2nd observer	0.93±0.76	0.70±0.18	0.58±0.09	<0.001
Left CFV 1 st observer	1.04±0.85	0.66±0.11	0.56±0.07	<0.001
Left CFV 2nd observer	1.09±0.83	0.69±0.16	0.57±0.07	<0.001
Right SFV 1 st observer	0.79±0.38	0.60±0.11	0.51±0.9	<0.001
Right SFV 2nd observer	0.80±0.42	0.62±0.13	0.52±0.07	<0.001
Left SFV 1 st observer	0.88±0.38	0.62±0.12	0.49±0.09	<0.001
Left SFV 2nd observer	0.90±0.40	0.63±0.13	0.51±0.07	<0.001
Right VSM 1 st observer	0.60±0.22	0.52±0.11	0.43±0.07	<0.001
Right VSM 2nd observer	0.64±0.25	0.53±0.13	0.46±0.08	<0.001
Left VSM 1 st observer	0.67±0.23	0.53±0.11	0.42±0.09	<0.001
Left VSM 2nd observer	0.65±0.27	0.53±0.11	0.43±0.07	<0.001

CFV: common femoral vein, SFV: superficial femoral vein, VSM: vena saphena magna

Conclusions: VWT of proximal deep and superficial lower extremity veins was found to be increased among BS patients without any clinical and radiological vascular involvement.

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FRI0579 DIAGNOSTIC UTILITY OF METATARSOPHALANGEAL SYNOVITIS IDENTIFIED BY ULTRASONOGRAPHY FOR EARLY RHEUMATOID ARTHRITIS

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Background: In patients with rheumatoid arthritis (RA), synovitis can occur at not only hand and finger joints but also the metatarsophalangeal (MTP) joints. However, power Doppler ultrasonography (PDUS) findings of the MTP joints and its diagnostic utility remain unclear in patients with early RA.

Objectives: The present study investigated whether the detection of MTP synovitis by PDUS is useful for the diagnosis of early RA.

Methods: The study enrolled 174 patients with suspected RA within 6 months of onset. We assessed the articular synovium using grey scale (GS) and power Doppler (PD) signals with a semi-quantitative method (grades 0–3) in both hand and finger joints (22 joints) and MTP joints (10 joints) by PDUS. In addition, we evaluated bone erosion and intermetatarsal bursitis. We defined GS grade ≥1 and PD grade ≥1 as PDUS synovitis. We evaluated the diagnostic accuracy of PDUS synovitis for RA.

Results: Of the 174 patients, 59 were diagnosed with RA and 115 did not have RA. Among the patients with RA, 47 (80%) had PDUS synovitis in the hand and finger joints and 32 (54%) had PDUS synovitis in the MTP joints. The frequencies of PDUS synovitis in each MTP joint, bone erosion of the fifth MTP joint, and intermetatarsal bursitis were significantly higher in patients with RA than in those without RA. The diagnostic accuracy of PDUS synovitis in the hand and finger joints was good, with a sensitivity of 80%, specificity of 77%, and accuracy of 78%. On considering the MTP joints in addition to the hand and finger joints, the diagnostic accuracy improved, with a sensitivity of 92%, specificity of 74%, and accuracy of 80%. In this study, 7 patients (12%) with RA had synovitis in the MTP joints and not in the hand and finger joints.

Conclusions: When synovitis cannot be detected in the hand and finger joints by PDUS, scanning of the MTP joints could be useful for the diagnosis of early RA.

	RA n = 59	non-RA n = 115	p-value
PDUS synovitis	32/59 (54%)	5/115 (4%)	<0.001
1 st MTP	24/118 (20%)	7/230 (3%)	<0.001
2 nd MTP	16/118 (14%)	5/230 (2%)	<0.001
3 rd MTP	13/118 (11%)	3/230 (1%)	<0.001
4 th MTP	10/118 (8%)	0/230 (0%)	<0.001
5 th MTP	17/118 (14%)	0/230 (0%)	<0.001
Bone erosion	8/59 (14%)	0/115 (0%)	<0.001
1 st MTP	2/118 (2%)	0/230 (0%)	0.114
2 nd MTP	1/118 (1%)	0/230 (0%)	0.339
3 rd MTP	0/118 (0%)	0/230 (0%)	1.000
4 th MTP	0/118 (0%)	0/230 (0%)	1.000
5 th MTP	5/118 (4%)	0/230 (0%)	0.004
Intermetatarsal bursitis	3/118 (3%)	0/230 (0%)	0.038

RA, rheumatoid arthritis

Fisher's exact probability test

Abstract FRI0579 – Figure 1. Power Doppler ultrasonography (PDUS) findings in the metatarsophalangeal (MTP) joints

RA, rheumatoid arthritis

Fisher's exact probability test

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