distal interphalangeal (DIP) joints, inflammatory involvement of both flexor (tenosynovitis) and extensor (paratenonitis) tendons, nail bed vascularization, synovio-entheseal complex at DIP level, enthesitis of flexor tendon, and bone proliferation. Grey-scale (GS) and power-Doppler (PD) synovitis and tenosynovitis were assessed according to OMERACT scores (0–3). Nail bed vascularization was scored 0 to 3. The other US lesions were scored 0 (absent) or 1 (present), both in GS and PD. The standard (HAQ) questionnaire, tender and swollen joint count, patient-reported tenderness, global disease activity scored by physician and by patient were assessed in all patients.

Results: Twelve (60%) patients presented hand and 8 (40%) patients foot dactylitis. Twelve (60%) patients had single dactylitis. Eight patients presented with multiple dactylitis: 4 dactylitis in 1 patient, (5%), 3 dactylitis in 4 patients (20%) patients and 2 dactylitis in 3 (15%) patients. Soft tissue thickening was present in all 34 dactylitis. MCP/MTP joint synovitis was present in 28 digits (82%), PIP joint synovitis in 23 digits (68%) and DIP joint synovitis in 17 digits (50%). Extensor paratenonitis was observed in 21 digits (62%) and flexor tenosynovitis in 20 digits (59%). Enthesitis of extensor tendons was present in 21 digits (62%) and enthesitis of flexor tendon in 5 digits (15%). Osteoproliferation was present in 21 digits (62%). The frequency of synovitis, tenosynovitis and enthesitis did not differ significantly between tender (n=25) and non-tender (n=9) dactylitis. A significant association between tenderness and the presence of power Doppler (χ^2 :17.9, $p<0.01$) and of edema in the soft tissue was observed (χ^2 :11.5, $p<0.01$).

Figure. Ultrasound lesions in dactylitis. Longitudinal scans of digital extensor tendons in GS (A,G,M) and in PD (D, J, P) US showed extensive peritendinous inflammation. Note the tendon thickening (A,G,M), the loss of fibrillar pattern (A,G) and hypoechoogenicity (A,M) of the extensor tendon. Digital extensor tendonitis or paratenonitis at the MCP joint (A,D), at the PIP joint (G,J) and at the synovio-entheseal complex at the DIP joint (M,P) (arrows in panels A,D,G,J,M,P indicate digital extensor tendon and asterisks indicate anechoic or hypoechoic material around the dorsal extensor tendon with PD signals). Longitudinal US scans of MCP and PIP joints in GS (B,E) and PD (C,F) mode. PD positive (C) and PD Doppler negative (F) synovitis at the MCP joint (B,C) and at the PIP joint (E,F). Note the pericapsular PD signals in panel F (arrows in panels B,C,E,F indicate synovial hypertrophy) with (C) or without (F) PD signals. Longitudinal scans of digital flexor tendon (H,I) at the PIP joint. Tenosynovitis of flexor digital tendon is depicted in GS (H) and PD (I) mode. Note the hypoechoic thickened tissue (arrows) with fluid (asterisk) inside the tendon sheath (H) with few synovial and intra-tendinous PD signals (I). Osteoproliferation at the PIP joint (K,L) and at the DIP joint (N,O) depicted in longitudinal scans. Enthesitis of digital flexor tendon is depicted in GS (Q) and PD (R). The latter finding is rare (arrows indicate enthesitis).

Conclusions: Dactylitis is a multi-compartment digit disease, and anatomical lesions are more heterogeneous than previously described. A significant amount of joint, tendon and enthesal inflammation persists in non-tender dactylitis. Patient-reported tenderness is associated with the presence of edema and/or power Doppler inside the soft tissue.

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FR10634

DO ANTHROPOMETRIC FACTORS INFLUENCE MEDIAN NERVE SIZE IN HEALTHY INDIVIDUALS? AN ULTRASOUND AND VOLUMETRY STUDY

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Background: Some (but not all) ultrasound studies of median nerve dimensions at the wrist have suggested that anthropometric factors such as height and weight are among the possible sources of variability in the normal population but this has not been systematically studied¹.

Objectives: The purpose of our study was to establish if hand and wrist volume or other standard anthropomorphic factors influenced median nerve size in normal

subjects using standard ultrasonographic techniques. If median nerve size is predictably related to anthropomorphic factors, adjusted normal reference ranges would improve the diagnostic precision of the test for carpal tunnel syndrome.

Methods: We studied 30 healthy subjects: 14 females and 16 males. We measured their height, weight, arm span, finger span and wrist circumference. Ultrasonography of the median nerve was carried out at the entrance to the carpal tunnel and at a second level 2 cm proximal to the wrist using an Esaote MyLab Class C ultrasound with a 12–18MHz linear probe. The wrist was marked at the distal wrist crease and 2cm proximally. Hand and wrist volume were measured using water displacement volumetry.

Results: The intra-rater reliability of volumetry measurements was excellent for both hand and wrist volumetry with a Cronbach alpha of 0.99 and 0.88 respectively. The intra-rater reliability for median nerve measurements was excellent with a Cronbach alpha of 0.96. The median nerve dimensions were not significantly different between male and female subjects, nor between the dominant and non-dominant hands. The mean median nerve cross sectional area (CSA) at the distal wrist crease was 10.68 mm² and at a point 2cm proximal to this it was 10.18 mm². The mean difference in CSA between these two points was 0.5 mm². The median nerve CSA was not significantly related to height, weight or hand size. It was not correlated with hand or wrist volume. No significant differences were found in relation to hand dominance or gender.

Spearman's correlation between median nerve CSA (distal, right wrist) and anthropometric factors

	Rho	p
Height	0.063	0.73
Weight	0.290	0.11
BMI	0.094	0.47
Arm Span	0.115	0.38
Finger Span	0.024	0.85
Wrist Circumference	0.095	0.46
Hand Volume	0.102	0.44
Wrist Volume	0.244	0.19

Conclusions: Anthropometric factors including BMI, hand/wrist volume were not found to be closely related to median nerve size in normal individuals.

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FR10635

DESCRIPTION OF VIDEOCAPILLAROSCOPY OF THE LABIAL MUCOSA IN COMPARISON WITH NAILFOLD VIDEOCAPILLAROSCOPY IN SCLERODERMA

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Background: Capillary bed of labial mucosa may be a potentially useful area for assessing abnormalities on the microcirculation. Videocapillaroscopy of the labial mucosa (LVC) in 12/13 scleroderma (SCL) patients showed capillaries disturbance such as great disorganization and anarchic orientation⁽¹⁾.

Objectives: To describe LVC features in SCL and compare them with healthy controls. (HC). To compare nailfold videocapillaroscopy (NVC) with LVC in HC and SCL patients.

Methods: ≥16 years old patients with SCL (ACR-EULAR 2013) were included consecutively since June to July 2016. Smoking patients were excluded. For the evaluation of the LVC we performed a general displaying and then we studied following areas: a-central (1 cm from the frenulum), b-lateral right and left (both 2 cm from the frenulum) and c-labial border. For evaluation of the NVC, 200x images were obtained from 2nd to 4th fingers both hands and was classified according Cutolo in early, active, late patterns⁽²⁾. For assesment through LVC: photographs (200x) for each subject were taken. We define quantitative characteristics as means of: capillary diameter, length and density. The average of these parameters was obtained from the evaluation of capillaries included in 1 mm² of at least 2 continuous images. In addition, the visibility of the subpapillary venous plexus, architecture, dilatation of capillaries, presence of megacapillaries and avascular areas were qualitatively evaluated (photo 1). Each image was reviewed by two experienced observers. We conducted the same process describe above for each healthy control subject.

Results: Twenty two patients were included (18 female, age 47±11 ys) with SCL (limited 17, diffuse 5); NVC pattern: early 8, active 11, late 3. Healthy subjects 12 (11 female, age: 34±10 years).

Average capillary density: 17±4.13 (13–26) in SCL vs 21±3.65 (16–28) in HC (p 0.00).

Average capillary diameter: 43±13.54 (17–83) SCL vs 19±1.67 μm (16–21) HC (p 0.02).

Mean capillary length: 185±34 μm (125–248) SCL vs 237±42 μm (178–313) HC (p 0.00).

In 22 SCL patients were observed dilated capillaries in 20 (90%), megacapillaries (≥70 μm) in 10 (45%) and 7 (32%) showed disturbed architecture with lost areas of the normal U-shape and changes in the parallelism of the main axis of the