Therefore, we are currently developing a tailor-made exercise therapy program for these complex patients that will evaluate the effects of exercise therapy on cardiorespiratory fitness and several secondary outcomes.

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THURSDAY, 14 JUNE 2018

Capillaroscopy I

SP0088

THE IMPORTANCE TO DIFFERENTIATE NORMAL FROM ABNORMAL CAPILLAROSCOPIC IMAGES FOR AN EARLY DIAGNOSIS OF DISEASE

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Medical doctors frequently get patients with Raynaud's phenomenon (RP), a frequent symptom in the general population, referred. The importance of distinguishing normal capillaroscopic findings from (pathognomonic) abnormal (pathological) findings, lies in the fact that this distinction allows the differentiation between a primary RP (not connected to any connective tissue disease [CTD]) from a secondary RP due to systemic sclerosis (SSc) and diseases of the scleroderma spectrum.

What is normal in primary RP?

A normal capillaroscopic pattern, by qualitative assessment, is characterised by a homogeneous distribution of hairpin shaped capillaries as a "comb-like structure", with a density of between 9–14 capillaries per mm. Yet, there exists a wide intra- and inter-individual variety in a normal population which will be discussed in this session.

What is pathognomonic abnormal in patients with RP due to SSc?

Patients with the RP who have an underlying clinically recognisable (=with skin involvement) SSc show a very characteristic combination of capillary abnormalities in the nailfold, which can easily be assessed through qualitative assessment (=pattern recognition). Maricq et al. described last century, with the widefield technique (magnification X12–14) the scleroderma pattern. This pathognomonic combination contains the following: a striking widening of all three segments of the capillary loop (arterial, venous and intermediate), loss of capillaries and disorganisation of the nailfold capillary bed. Many branched "bushy" capillaries may also be observed.

In 2000, Cutolo et al. qualitatively assessed the nailfolds of an SSc cohort with patients fulfilling the American College of Rheumatology (ACR) criteria for SSc with the nailfold videocapillaroscopic (NVC) technique (magnification X200). According to the different proportions of the hallmark parameters of the scleroderma pattern (giants, capillary loss, haemorrhages and (neo) angiogenesis Cutolo et al. defined three patterns "early", "active" and "late".

The central role of capillaroscopy in distinction between a primary and secondary RP due to SSc is reflected by the fact that capillaroscopy is one of the new ACR/EULAR criteria for classifying a patient as having SSc.

Besides playing a paramount role in distinguishing a primary from secondary RP, capillaroscopy has an additional role. It can inform the rheumatologist dealing with a patient population with merely the RP and no other signs of a CTD, who will futurely develop SSc. This role is reflected by capillaroscopy playing a central role in the LeRoy and VEDOSS criteria for (very) early diagnosis of SSc.

What about capillaroscopic morphology in connective tissue diseases other than SSc?

No large scale prospective cohorts exist describing capillaroscopic morphology in connective tissue diseases other than SSc. Moreover, several morphologic

definitions exist across literature of different schools. The EULAR Study Group on microcirculation in Rheumatic diseases was set up in 2014 to tackle, in between others these working points.

SUGGESTED FURTHER READING:

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SP0089

HOW TO DISTINGUISH THE MAJOR CAPILLAROSCOPIC PATTERNS

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The most well-known pattern of capillaroscopic abnormality is the 'systemic sclerosis-pattern', characterised by dilated capillary loops, areas of avascularity, haemorrhages and distortion of the normal nailfold architecture. Cutolo and colleagues have described three patterns within this spectrum: 'early', 'active' and 'late', on the basis of numbers of giant capillaries and of microhaemorrhages, the extent of capillary loss and of disorganisation of the capillary architecture, and the presence of angiogenesis.¹ Systemic sclerosis-pattern abnormalities are also seen in patients with inflammatory muscle disease, especially in those with dermatomyositis, when areas of angiogenesis ('bushy' or 'ramified' capillaries), are very commonly seen.

Abnormalities have also been described in other diseases, but these are less specific. This lecture will illustrate the different patterns of abnormality with a focus on systemic sclerosis and inflammatory muscle disease. Capillaroscopic patterns which have been reported in systemic lupus erythematosus, antiphospholipid syndrome, and childhood connective tissue diseases will also be described.

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Ultrasound advanced I

SP0090

US FOR PULLEY LESIONS – CLINICAL RELEVANCE

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In the human body the pulleys are represented as structures that change the path of a tendon as they pass over them. The pulleys are composed of fibrocartilage (finger pulleys), cartilage (trochlea of the eye), ligament (extensor retinaculum) or bone (lateral malleolus). The clinical relevance of the pulleys of the flexor digitorum tendons (FDT) of the hand is indisputable in that it affects the flexion and excursion efficiency of the FDT and can generate pain. This system is composed of the transverse carpal ligament, the palmar aponeurosis pulley, and the digital flexor pulley system. There is some controversy about the functional relevance of the injury of the different FDT pulleys including the palmar aponeurotic pulley.

Pulleys can be affected by different conditions including chondroid metaplasia, tenosynovial ganglions, traumatic or inflammatory lesions of the FDT sheet, sport practice or work activities. Changes in thickness have recently been identified in flexor pulleys in patients with psoriasis arthropathy with a history of dactylitis and have been related to the so-called Koebner response.

Musculoskeletal ultrasound allows the visualisation of these structures statically and dynamically while at the same time it is an instrument to increase the precision in steroid injection of the trigger finger when is needed

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