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The contribution of capillaroscopy to the differential diagnosis of connective autoimmune diseases

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Raynaud's phenomenon (RP) is one of the earliest clinical hallmarks of microvascular involvement in several connective autoimmune rheumatic diseases. The direct observation of the microvasculature with nailfold videocapillaroscopy (NVC) is useful for an early diagnosis of connective autoimmune diseases (secondary RP) and differentiation from primary (unsymptomatic) RP. Generally, to detect early pathologic capillaroscopic changes, the following parameters are considered: presence of enlarged and giant capillaries, haemorrhages, disorganization of the vascular array, ramified/bushy capillaries and loss of capillaries. Careful capillaroscopic analysis of subjects affected by primary RP can detect the earliest signs of the transition to secondary RP and thus screening procedures for further differential diagnosis within connective

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autoimmune diseases can be undertaken. In systemic sclerosis, the recognition of clear and different NVC morphological patterns (“early”, “active”, “late”) should suggest including this analysis in the classification criteria of the disease.

Key words: capillaroscopy; connective autoimmune diseases; dermatomyositis; systemic lupus erythematosus; systemic sclerosis.

RAYNAUD’S PHENOMENON

Raynaud’s phenomenon (RP) (Figure 1) is the clinical hallmark of microvascular involvement in several connective autoimmune rheumatic diseases, and is particularly important in systemic sclerosis (Ssc).[1] The occurrence of RP should lead to a prompt microvascular analysis through a capillaroscopic examination to obtain an early differential diagnosis between primary (uncomplicated) and secondary (disease-associated) RP.

According to population-based surveys of various ethnic groups, the prevalence of RP is approximately 3–5% and geographic variations in prevalence reflect differences in climate.[2,3] Clinical criteria have been suggested to distinguish between patients with uncomplicated, or primary, RP from those with secondary, disease-associated RP (mostly connective autoimmune rheumatic diseases). The suggested criteria for primary RP include[4]:

- symmetric attacks
- the absence of tissue necrosis
- ulceration or gangrene
- the absence of a secondary cause (based on medical history and physical examination of the patient)
- a negative test for antinuclear antibodies

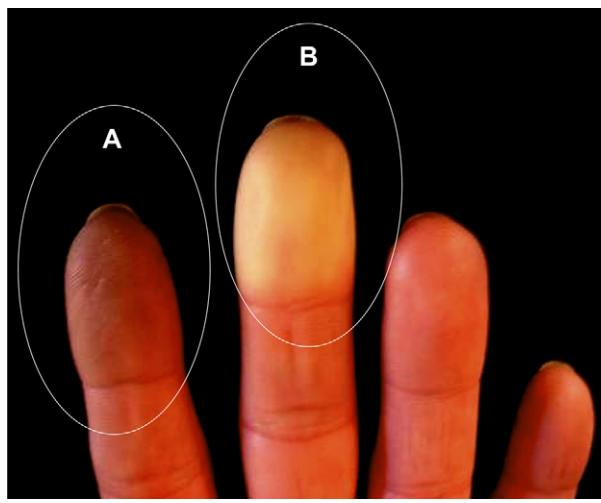

Figure 1. Raynaud’s phenomenon. The microcirculatory effects of vasoconstriction are visible in the fingers (A-blue and B-white).