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LETTER TO THE EDITOR

Comment on "The evaluation of nailfold capillaroscopy pattern in patients with fibromyalgia"

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Scientific literature on capillaroscopic findings in primary fibromyalgia are scarce. Further analysis of microvascular changes may contribute to a better understanding of the disease pathogenesis. In 30 patients with primary fibromyalgia, Coskun Benlidayi et al.[1] observed significantly higher mean capillary loop diameter, higher number of micro-aneurysms, avascular areas, and neoangiogenic capillaries, compared to healthy controls. Together with the presence of non-specific changes, i.e., dilated capillaries, capillaroscopic features of microangiopathy were also detected, despite with a low frequency such as giant capillaries and avascular areas.[1]

Raynaud's phenomenon (RP) associated with primary fibromyalgia is characterized by a benign course, absence of digital ulcers, and negative immunological tests. Therefore, RP in primary fibromyalgia better fits with the definition for primary RP. In our study, using quantitative analysis, higher capillary diameters and dilated capillaries were observed in patients with primary fibromyalgia (n=26, 65% with symptoms of RP), but without features of microangiopathy. Capillaroscopic findings were similar to those in primary RP. The difference between capillary diameters of the arterial and venous limb in primary fibromyalgia versus healthy controls reached statistical significance, only for the patients who exhibited symptoms of RP.[2] In primary RP patients, a slight increase in the capillary diameters can be also observed.[2-5] The mean capillary density in primary fibromyalgia patients (9±1.1) was significantly lower compared to healthy individuals (10±0.59, $p<0.05$), but avascular areas were not observed. Giant capillaries, hemorrhages, and neoangiogenic capillaries were not detected in primary fibromyalgia patients, either.[2]

Similarly, Morf et al.,[6] in 10 patients with primary fibromyalgia, observed a significantly lower capillary number, more capillary dilatations, and irregular formations compared to healthy controls. Analogous are also the observations of Frödin et al.,[7] who found no hemorrhages or avascular areas in 10 patients with primary fibromyalgia. Based on qualitative analysis of the capillaroscopic images, non-specific findings were detected, i.e., moderate enlargement of capillary loops, slight variations in caliber, and slight tortuosity.[7]

In primary fibromyalgia, using the definition *secondary RP* may lead to misapprehension. Characteristics of RP in primary fibromyalgia

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patients are similar to those with primary RP[2] and, here, the term that better describes the clinical state is associated RP. On the contrary, *secondary RP* in the context of systemic rheumatic disease is associated with positive immunological tests, while capillaroscopic features of microangiopathy may be present or absent, depending on the underlying pathology and the degree of vascular damage.

Interesting category are RP cases with definite features of microangiopathy (giant capillaries, avascular areas), but without other clinical features of systemic rheumatic disease and in the absence of positive immunological tests, that can be classified as suspected *secondary RP*, having the potential for future development of connective tissue disease and requiring close surveillance. Moreover, pre-stages of systemic autoimmune diseases may be subclinical. In this regard, identification of capillaroscopic microvascular pathology in primary fibromyalgia patients should be also considered with caution and future longitudinal studies with regular follow-up of these patients would reveal the symptom evolution.

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