Nail Fold Capillary Pattern in Systemic Scleroderma

S. Jabłońska

Department of Dermatology Warsaw School of Medicine, Warsaw, Poland

Prof. Dr. S. Jabłońska, Department of Dermatology, Warsaw School of Medicine, Warsaw (Poland)

study using just capillaroscopy, since only single cases in our very large series did not show any abnormalities in the nail fold capillaries [2]. There is also a characteristic capillaroscopic pattern of dermatomyositis, which may be of importance in differentiating it from scleroderma: the loops are giant with irregular shape, showing various deformities and dilatations throughout the whole length (bushy capillaries), and not only in the central part as in Raynaud’s loops, with a very enlarged subpapillary plexus and hemorrhages [3]. These abnormalities were found in 61% of cases, in some patients the loops were of Raynaud’s type, in some the capillaries were unchanged. Repeated examinations for several years

I read with great interest the paper by Ohtsuka and Ishikawa [1] on the statistical definition of nail fold capillary pattern in systemic sclerosis with videographs quantitatively analyzed by a computer and an image processor. This study presents a step forward in nail fold capillaroscopy. The conclusion of the study was that 9% of patients with systemic sclerosis showed a normal capillary pattern, a percentage which is much higher than the one we found in our (up to 20 years) have shown remarkable t changes in the capillaroscopic pattern with the disappearance of bushy capillaries and extravasations, whereas repeated studies in patients with systemic scleroderma showed persistence or progression of capillary abnormalities characteristic of systemic sclerosis. The authors indicate a normal capillaroscopic pattern in systemic lupus erythematosus, and we found in a proportion of cases (about 60%) divergent abnormalities of the loops, some with the characteristic pattern of Raynaud’s phenomenon [4]. However, the capillary changes in systemic lupus erythematosus are not characteristic of the disease and therefore have no diagnostic significance.

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I believe that further studies by the authors, probably with evaluation of some additional parameters, will allow to quantify also abnormalities seen in dermatomyositis and possibly even in systemic lupus erythematosus.

References


ratio was the same as ours (60%), showed a nail fold capillary abnormality characteristic of the
disease. This means that the abnormality you detected may be the same as the one we observed,
even if the methods used were different. And we found that repeated examinations for several
years showed remarkable changes in the capillaroscopic pattern, especially in DM patients. Our
results indicate that 36% of normal controls showed a systemic lupus erythematosus pattern, but
50%
Thank you very much for your excellent suggestions and questions about our paper and further
studies, which I would like to answer. Our result was obtained by using a mathematical method,
canonical discriminant analysis; its calculations were all done by a computer (NEC PC9801VX)
and its program (Handbook Statistics of Personal Computer). We showed a simple result with
two groups of subjects in our paper [1]. We had two reasons for the choice of this analysis: one
was that the four parameters we measured showed statistically the same difference between
normal control and systemic lupus erythematosus and between systemic sclerosis and
dermatomyositis (DM), and the other reason was its clear-cut result.
We got, however, another statistical result (table 1), which we did not show in our paper, from
four groups using the same mathematical method. Only 15% of systemic sclerosis cases showed
DM patterns, but 60% of DM cases showed a DM pattern. The result indicates that only a small
proportion of systemic sclerosis patients shows a DM pattern and that DM patients showed a
pattern different from that of systemic sclerosis patients. You observed that 61% of DM patients,
which
Table 1. Statistical definition of nail fold capillary pattern by canonical discriminant analysis in
normal controls and patients with connective tissue diseases
DM pattern
SS pattern
SLE pattern
Subjects
Normal pattern

Figures in parentheses indicate percentages. SLE = Systemic lupus erythematosus; SS = systemic
sclerosis.
of patients with systemic lupus erythematosus showed a normal pattern. This result indicates that
normal control and systemic lupus erythematosus cases overlap in their capillary pattern using
the four parameters we used. We are now trying to evaluate the difference of capillaries between
normal controls and systemic lupus erythematosus with additional parameters using another
mathematical method. We hope to publish the results in some journal in the near future.
Reference
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