

## THE ROLE OF CAPILLAROSCOPY IN THE ASSESSMENT OF CHILDREN WITH RAYNAUD PHENOMENON

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### Introduction

*Raynaud's Phenomenon (RP)* is an episodic reaction to cold or stress, manifested as a change in extremity skin color. There are two types of RP. Primary RP is due to functional changes in the vessels, while secondary is due to endothelial injury in the context of connective tissue diseases (CTD).

### Keywords

capillaroscopy, children, endothelial injury

### Purpose

To evaluate the role of capillaroscopy in the differentiation of primary and secondary pediatric RP



Fig. 1. Normal capillaroscopic pattern



Fig. 2. Non-specific capillaroscopic pattern (patient with SLE)

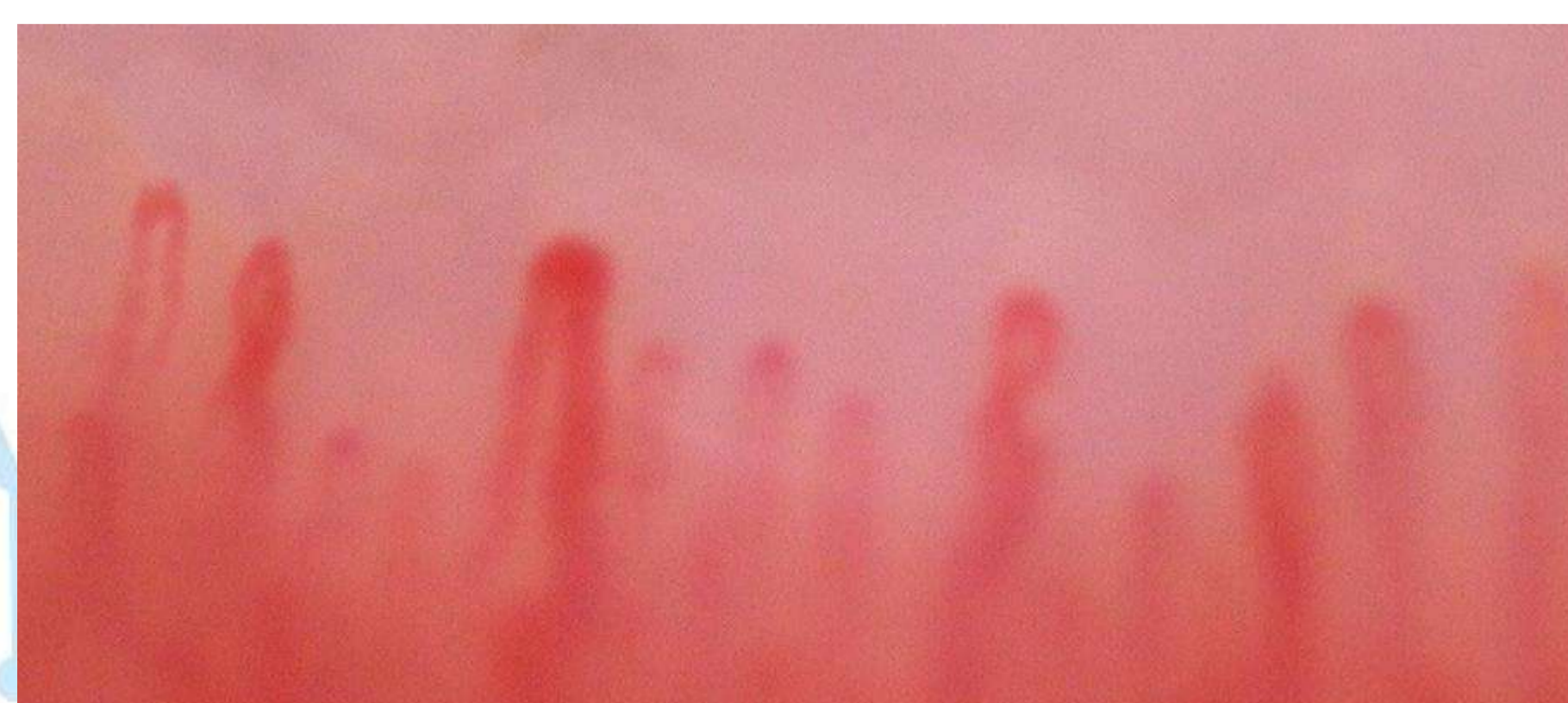


Fig. 3. Early scleroderma capillaroscopic pattern



Fig. 4. Active scleroderma capillaroscopic pattern

### Material and methods

We conducted a search in PubMed database with the following search-terms: "Raynaud phenomenon in children", "Pediatric Raynaud phenomenon", "Capillaroscopy in children", "Capillaroscopy in childhood". A literature review was performed to analyze the existing data on RP in children.

### Results

RP is reported as a first symptom of rheumatic disease in 61-70% of patients with systemic sclerosis, 58% of patients of patients with mixed connective tissue disease and 56% of patients with overlap syndrome. The differentiation of primary RP from secondary RP as well as detecting the markers that suggest its progression to CTD could facilitate early diagnosis of these diseases. Capillaroscopy is a simple, non-traumatic and cost-efficient tool with a major role in the differentiation of RP based on the capillaries look. Normal aspect suggests primary RP (fig.1), while altered shape and density – the presence of a CTD (fig.2, 3, 4).

### Conclusions

The application of capillaroscopy for differential diagnosis between primary and secondary Raynaud phenomenon in children for an early diagnosis of CTD could shed light on pathogenetic and evolutive aspects, but also on the treatment response.