

CAPILLAROSCOPIC FINDINGS IN PATIENTS WITH RAYNAUD'S PHENOMENON

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Figure 1

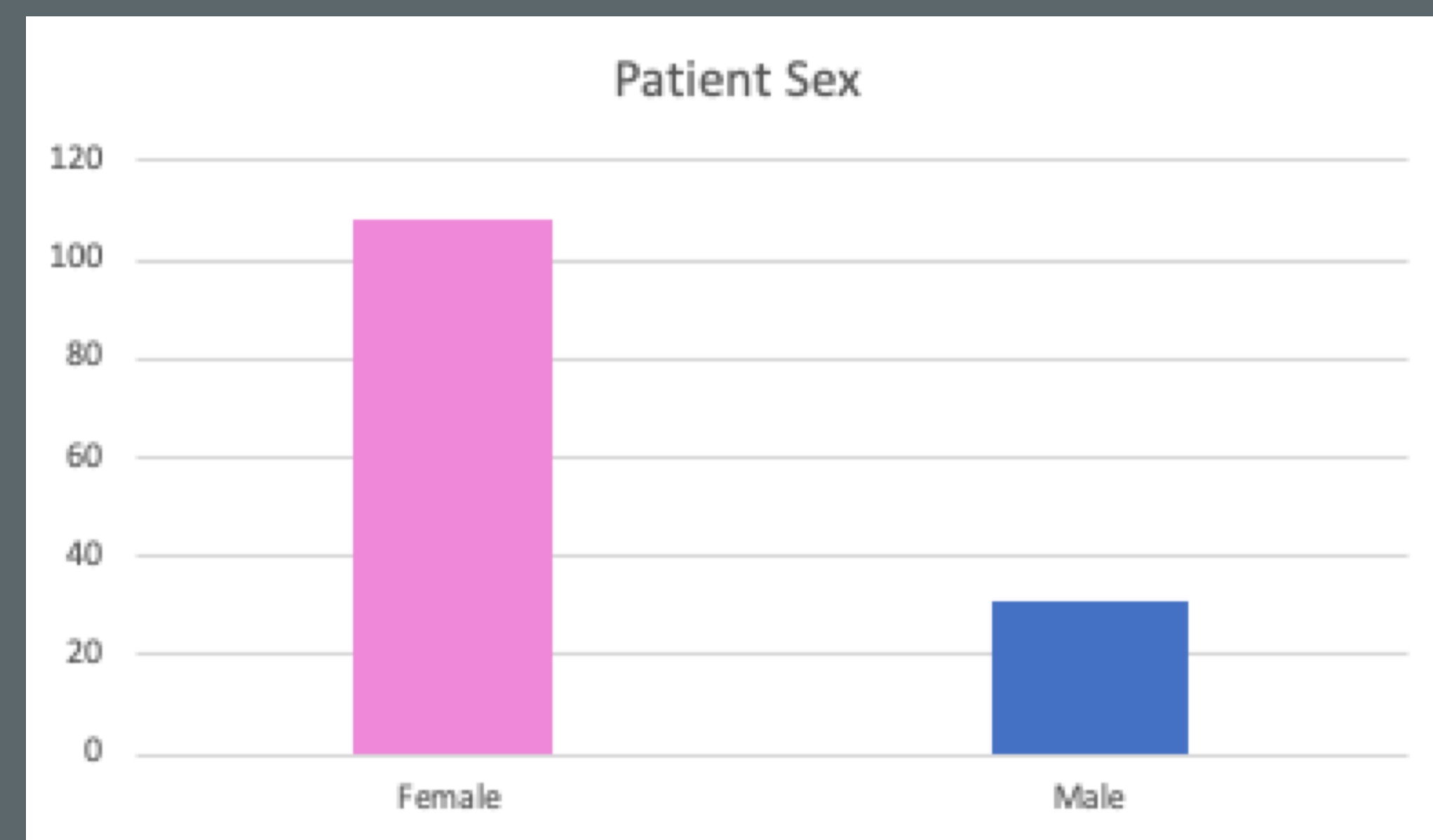


Figure 2



<https://www.the-rheumatologist.org/article/rheumatologists-find-naifold-capillaroscopy-increasingly-useful-diagnostic-tool/?singlepage=1>

Introduction

Raynaud's phenomenon is a disorder of blood vessels, usually localised in the fingers or toes that results in vasoconstriction when the patient experiences cold or stress. Initial colour of the affected area due to vasoconstriction is white, then because of hypoxia changes into blue. The final colour change is red because of hyperaemia. In extreme cases, this disease could lead to sores or tissue ischaemia. Capillaroscopy is a non-invasive diagnostic technique designed to evaluate microcirculation.

Objective

The key objective is to summarise, through clinical data, the epidemiological characteristics of patients with a history of acral blood flow disorders and to verify the reliability of the capillaroscopic investigation. In this project, the fingertips were analysed only.

Methodology

Capillaroscopy was conducted on 139 patients with subjective complaints of cold hands. Epidemiologic data was acquired, including history of any pre-existing disorders that patients had to see whether it would put them at higher risk for development of Raynaud's syndrome. The time of year the investigation was conducted was also recorded, to see if it was influential on the results.

Outcomes

Of the 139 patients that were investigated, 82 patients (59%) showed pathological findings, which means the diagnosis of Raynaud's syndrome would need further investigation to identify any underlying disease. The rest of the patients had a history of acral blood flow disorders, however, without any pathological finding on capillaroscopy, it is not possible to link the underlying conditions with Raynaud's disease. Out of the total number of the patients, 108 were women and 31 were men [Figure 1]. The mean age was 42.8 years, with a median of 42.9 years. In patients with pathological capillaroscopic findings we observed an irregular dispersion of capillaries, dilation of the capillary loops, changes of the shape of capillaries and haemorrhages [Figure 2]. When investigating the effect of weather, 36 patients (44%) with pathological capillaroscopic findings were diagnosed between the months of October and March, which are the coldest six months of the year [Figure 3], meaning that there is no correlation of the capillaroscopic result with the outdoor temperature.

Conclusion

The study confirms that not every patient with a history of acral blood flow disorders manifests with pathological changes of capillaries. Those patients are more likely have a functional problem with the acral blood flow, and are therefore diagnosed as Raynaud's syndrome with no other underlying condition. Alternatively, there are patterns in the capillaroscopic findings such as structural changes, which point in the direction of Raynaud's syndrome. This can be a sign of a hidden disease. Therefore these patients should be thoroughly followed-up, especially those with connective tissue diseases, as they can appear years after the first indication of Raynaud's phenomenon. Capillaroscopy in these early stages could be the only investigation to identify this potential threat. This study has also documented that capillaroscopy is a reliable way to identify pathologies in the fingertip regardless of the outdoor temperature.

Figure 3



References

Wigley, F.M., Herrick, A.L., Flavahan, N.A. and Springerlink (Online Service (2015). *Raynaud's Phenomenon : A Guide to Pathogenesis and Treatment*. New York, Ny: Springer New York.

Figure 4

