Nail bed hemorrhage: a clinical marker of optic disc hemorrhage in patients with glaucoma
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Purpose: To examine the characteristics of nailfold capillary changes in patients with glaucoma and to analyze their possible relationship to other clinical characteristics of glaucoma.

Methods: One hundred eight glaucoma patients and 38 control patients were enrolled in the study. Eighty-six patients were classified as having normal tension glaucoma and 22 patients as having primary open-angle glaucoma. All patients underwent a complete ophthalmic examination and then a physical examination (in the rheumatology department) and were questioned regarding a history of systemic symptoms. Nailfold capillaroscopy was performed, and the results were analyzed by a single observer in a masked manner. Both the χ² test and multivariate logistic regression analysis were performed to determine which ocular characteristics were associated with the findings of nailfold capillaroscopy.

Results: In the glaucoma patients, 55.6% showed dilated vessels, 35.2% showed loss of capillaries, and 19.4% showed nail bed hemorrhages by nailfold capillaroscopy. Disc hemorrhage was significantly associated with avascular area (odds ratio, 11.13; p < .001) and nail bed hemorrhage (81.59; p < .001). By multivariate logistic regression analysis, avascular area and nail bed hemorrhage continued to be independently associated with the presence of disc hemorrhages in glaucoma patients. No significant differences of association were found between patients having normal tension glaucoma and those having primary open-angle glaucoma.

Conclusions: Nailfold capillaroscopy may give valuable information about some features of patients with glaucoma. Nail bed hemorrhage and loss of nail capillaries were strongly associated with the presence of optic disc hemorrhage, and the association was stronger with nail bed hemorrhage. No differences were observed between patients with normal tension glaucoma and patients with primary open-angle glaucoma.