

Study of the microcirculation of oral mucosa in healthy subjects

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SUMMARY

The research has the following aims:

- 1: to verify the applicability of capillaroscopic investigation to oral mucosa;
- 2: to propose oral mucosa as an alternative to the fingernail fold for capillaroscopic investigation;
- 3: to describe the characteristics of the microcirculation of oral mucosa in healthy subjects.

100 healthy patients were examined. The characteristics of the micro-circulation in the areas of gum mucosa and the mucosa covering of the lower lip were examined using computerised videomicroscopic techniques. For each patient we evaluated the visibility, the course, the density, the tortuosity and any images characteristic of capillary loops, besides the possible presence of microhaemorrhages, the average calibre of capillary loops and the number of capillary loops visible per square millimetre.

The investigation was simple, non invasive and repeatable for each patient. An investigation of gum mucosa has revealed a course of capillary loops both parallel and perpendicular to the surface: often the tops of the capillary loops appear as regularly distributed dots or commas. Microcirculatory architecture in the area of the mucosa covering is characterised by capillary loops with a variable diameter, course and length; next to typical capillary loops with the appearance of horse stirrups, there are other loops similar to hairpins, commas and cork screws; there are also rare microhaemorrhages with the aspect of reddish stains, that could be caused by microtraumas. Visibility was very good in the area of the mucosa covering of the lower lip: mediocre in the area of gum mucosa.

Our research has highlighted, that today it is possible to carry out a capillaroscopic investigation of oral mucosa in a simple and reliable way. Future research could evaluate how "normal microcirculation", that we describe in this paper, is modified during pathology