

## Smoking habit and labial microcirculation

Giuseppe Alessandro Scardina and Pietro Messina \*

Dept. of Odontostomatological Science "G. Messina" University of Palermo

*Key words:* labial mucous, capillaroscopy, smoker

---

---

### SUMMARY

---

---

Smoking habit is an important risk factor in oral diseases. In the last years, many studies tried to evaluate smoking effects on the microcirculation. It had never been used such a simple not invasive technique, like the video-capillaroscopic one. The aim of the research is to analyse "in vivo", the microcirculation labial characteristics, and to evaluate the smoking effects by means of computerised videocapillaroscopy techniques.

35 healthy no-smoker patients and 35 healthy smoker patients were examined. The characteristics of the microcirculation in the areas of labial mucous were examined using computerised vid-eomicroscopic techniques. For each patient we evaluated the visibility, the course, 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 non invasive and repeatable for each patient. In both groups the investigation of labial mucous revealed a course of capillary loops parallel to the surface.

In smoker patients, it was possible to underline capillaries of a smaller calibre ( $P < .001$ ), and a higher number of detectable capillaries compared with no-smoker patients ( $P < .001$ ). We observed an important correlation between the capillary tortuosity and the smoking habit ( $P < .001$ ).

Our research highlighted, that today it is possible to carry out a capillaroscopic investigation of labial mucous in a simple and reliable way. Furthermore, smoking habit represents a real risk factor of oral disease, greatly affecting the microcirculation.

### INTRODUCTION

Capillaroscopy is a methodology used to study the microcirculation that arouses great interest for the possibility it offers to observe, "in vivo", small vessels through the use of a microscope (Bukhari M. *et al.* 2000, Cantatore F.P. *et al.* 2000, Maricq H.R. *et al.* 1980). Today it is becoming more reliable thanks to the improve-

---

\* L'articolo è pubblicato su fondi ricerca scientifica (ex quota 60% Prof. P. Messina).