



Palmar telangiectasia is associated with the intensity of smoking

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TO THE EDITOR:

Palmar telangiectasias (PTs) usually involve the thenar and hypothenar areas. In the mid-20th century, they were described as cutaneous vascular manifestations, including vascular spiders and palmar erythema, during pregnancy.⁽¹⁾ There are various etiologies of PT⁽²⁻⁴⁾; they can have a primary cutaneous pathogenesis; they can be a manifestation of systemic, neoplastic, or infectious diseases; or they can be drug-induced. In 2012, PTs were reported in a patient with Graves' disease.⁽⁵⁾ A more recent study suggested that PT is a cutaneous sign of smoking.⁽⁶⁾

In our clinical practice, we encounter a lot of smokers among our patients. That is not surprising, because tobacco smoke has components that are known to cause oxidative stress, as well as to reduce the innate and host immune responses, thus affecting cellular and humoral immunity. Smoking is considered a major risk factor for severe diseases such as lung cancer and COPD. However, we have not seen PT in every current smoker. The aim of this study was to determine the prevalence of PT among ill and healthy subjects, taking into consideration their general health and smoking status.

We recruited 236 adult subjects. We excluded individuals who had been taking system corticosteroids or epidermal growth factor receptor inhibitors, as well as those who had Graves' disease, those who were pregnant, and those who had been taking oral contraceptives. We asked the participants about their smoking status, defined as nonsmoker, current smoker, or former smoker (having quit smoking ≥ 1 year prior). We asked current and former smokers about the duration of their smoking (in years) and the number of cigarettes they smoked per day. It was possible to determine the total exposure to tobacco smoke (i.e., the total smoking history) by calculating pack-years (number of packs smoked per day multiplied by the number of years the person has smoked). During the physical examination, we paid special attention to presence of PT. We performed a statistical analysis to determine whether PT was associated with demographic characteristics, illness, and smoking intensity.

The study sample comprised 236 adults (116 men and 120 women) with a mean age of 60.87 ± 15.72 years—31 were healthy, and 205 suffered from at least one disease: COPD ($n = 47$); asthma ($n = 5$); pneumonia ($n = 17$); arterial hypertension ($n = 38$); pulmonary embolism ($n =$

18); lung cancer ($n = 41$); lymphadenopathy ($n = 9$); or other diseases ($n = 30$). Of the 236 individuals evaluated, 79 were current smokers and 157 were nonsmokers (comprising 56 former smokers and 101 never smokers). Pearson's chi-square test showed that the prevalence of PT among the smokers did not differ significantly from that observed among the patients diagnosed with any of the diseases listed above ($p = 0.132$). Using a t-test for equality of means, we found no significant difference between the current and former smokers in terms of the number of pack-years ($p = 0.048$). Although none of the never smokers had PTs, we found them in 65 (82.27%) of the 79 current smokers and in 23 (41.07%) of the 56 former smokers. A two-tailed t-test for independent samples showed a highly significant difference between the subjects with PT and those without in terms of the total exposure to tobacco smoke ($p \leq 0.001$). We also found a highly significant difference between the current and former smokers in terms of the prevalence of PT ($p \leq 0.001$).

Our study showed that the appearance of PT is strongly associated with the intensity of smoking. The lack of a standardized measure might explain previous discrepancies in terms of whether PT correlates with smoking history (pack-years), with the mean number of cigarettes smoked per day in current smokers,⁽⁶⁾ or with the mean number of cigarettes smoked by former smokers.

Our findings of no PT in the never smokers and that PT existed not only in current smokers but also in former smokers with a history of a certain intensity of smoking might speak in favor of the importance of the components of tobacco smoke in the etiopathogenesis of PT. There is evidence that some subjects are more susceptible to smoking-related diseases. The high degree of variation in the number of pack-years associated with PT suggests that the appearance of PT in smokers could be influenced by individual susceptibility to the components of tobacco smoke.

We found that PT was not associated with gender, age, or any of the diseases from which the participants suffered. One previous study suggested that there is an association between PT and lung cancer.⁽³⁾ Given the results of our study and the fact that smoking is a major risk factor for lung cancer, that association requires further analysis in studies with larger samples. It remains unknown whether smoking contributes to the appearance of telangiectasia and lung cancer; it is possible that both are consequences

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of smoking-related disturbances in homeostasis. Among the individuals evaluated in our study, 41 had lung cancer. PT was seen in only 24 of the 32 smokers. Finally, some of the smokers with PT suffered from smoking-related diseases other than lung cancer, such as COPD and cardiovascular disease.

PT in smokers should be the focus of detailed molecular biology research. Detected by simple inspection in clinical practice, PT might serve as indicator of disturbances in homeostasis and could be a useful marker in the primary prevention or early detection of serious smoking-related diseases.

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