DOES SMOKING ACCELERATE NAIL GROWTH?

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ABSTRACT
There are thousands of components in cigarette smoke that may be pharmacologically important and most of them are harmful to the body especially nicotine but smoking might have a useful effect on the body. We aimed to assess the effect of smoking on the nail growth in smoker individuals. We did a case control study of 25 male smoker participants in the nail growth follow-up study who were smoking cigarette above 25 cigarettes / day for 5-20 years duration. Their ages ranged from 20-60 years with a mean of 43.27 years ± 13.61. We also measured the nail growth of 32 male non-smoker participants as a healthy control group. Their ages ranged from 20-60 years with a mean of 43.83 years ± 12.79. The nail growth in smoker participants ranged from 0.097-0.113 with a total mean rate of 0.101 mm/day ± 0.0038, while in non-smoker participants, the nail growth ranged from 0.095-0.11 mm/day with a total mean rate of 0.095 mm/day ± 0.0095. The nail growth of smokers was found to be faster as compared with the nail growth of non-smoker control group. So, smoking could be beneficial to human beings in regarding acceleration of nail growth. This finding might have some implications on other human tissues.

KEY WORDS: Smoking, nail growth.

INTRODUCTION
There are thousands of chemical components in cigarette smoke that may be pharmacologically important, most of them are harmful to the body especially nicotine. So smoking can induce many medical problems like cancer, aging of the skin, fetal development abnormalities and sometimes cigarette smoking is associated with progression of genital wart infection, to cancer of cervix, glans penis, anus, vulvogenital area & periungual skin. Also photodamage is markedly exacerbated in smokers. In addition, smoking regarded as a possible risk factor that can complicate and exacerbate an underlying lipoprotein abnormality and hyperlipidaemia, which is a major risk factor for coronary artery disease. Still smoking might have some beneficial effects on many diseases like ulcerative colitis, Parkinson diseases and aphthous stomatitis. It has also been reported that smoking significantly depresses the inflammatory response in irritant contact dermatitis and this has been attributed to nicotine rather than to other components of cigarettes smoke. The aim of the present work is to assess the effect of smoking on the nail growth.

METHODOLOGY
Participants
Twenty-five male smokers were included in the present work with age range from 20-60 years with a mean of 43.27 years ± 13.61. The duration and the number of cigarettes were calculated.

Thirty-two male non-smokers were evaluated as a control. Their ages ranged from 20-60 years with a mean of 43.83 years ± 12.79. Any associated medical problems like heart disease, hypertension, diabetes mellitus were excluded.

Procedures of nail growth measurements
A T-shaped mark was etched on the proximal part of the left thumb nail plate close to the distal border of the lunula, using a sharp large needle guided by a plastic mould in which a T-shaped guide was cut (Figure). The plastic mould was made from half of the body of a disposable syringe, cut longitudinally and in which the T-shaped guide was made at one of its ends. The mould was placed over the dorsal surface of the nail plate, so that the T-cut was perpendicular to the proximal nail fold. The measurements were done from the proximal nail fold to the etched mark. The first reading was made immediately after etching (X-reading and the second reading about one month later (Y-reading) (Figure 1).

FIGURE 1: Method of nail growth measurement.

Measurements were carried out using a vernier caliper. All technical procedures were done under a x3 large diameter magnifying lens suspended on a stand fitted with a laterally positioned light projector when it is needed.

The linear growth of the nail plate was calculated using the following formula:
Smoking accelerate nail growth

$$X - Y = \text{nail growth/day}$$

Statistical methods (data analysis)
A case control study was done and Student’s t-test was used to measure the level of significant differences in the given data between smoker and non-smoker groups (11).

RESULTS
Smoker individuals
Nail growth was measured in 25 healthy smokers. The duration of smoking ranged from 5-20 years and the number of cigarettes were above 25/day. The participants were divided into 5 groups according to their ages (Table 1). The nail growth per day ranged from 0.097-0.113 mm/day with a total mean rate of 0.101 mm/day (Table 1).

<table>
<thead>
<tr>
<th>Age / year</th>
<th>Number</th>
<th>Smokers</th>
<th>Non-smokers</th>
<th>Mean ± SD of age / yr.</th>
<th>Mean rate ± SD of nail growth (mm/day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-29</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>24.33 ± 2.81</td>
<td>25.47 ± 2.10</td>
</tr>
<tr>
<td>30-39</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>33.18 ± 1.59</td>
<td>35.46 ± 2.25</td>
</tr>
<tr>
<td>40-49</td>
<td>12</td>
<td>5</td>
<td>5</td>
<td>42.35 ± 1.48</td>
<td>43.70 ± 1.83</td>
</tr>
<tr>
<td>50-59</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>55.33 ± 1.38</td>
<td>52.29 ± 1.57</td>
</tr>
<tr>
<td>&gt; 60</td>
<td>1</td>
<td>9</td>
<td>9</td>
<td>61.17 ± 0.00</td>
<td>62.27 ± 1.91</td>
</tr>
<tr>
<td>Total mean</td>
<td>25</td>
<td>32</td>
<td></td>
<td>43.27 ± 13.61</td>
<td>43.83 ± 12.79</td>
</tr>
</tbody>
</table>

DISCUSSION
We all know that smoking is very harmful habit and prohibited in many countries but still could be useful in some aspects of life like a psychological relief for some individuals and could be useful for patients with ulcerative colitis and Parkinsonism and aphthous stomatitis (9, 6, 8).

Also smoking depresses the inflammatory response in irritant contact dermatitis (6, 7).

The present study has reached very interesting and conflicting results as smoking was found to be very useful for the nail to grow faster. This result is raising a big dilemma like many others thinks in life that are harmful but could be useful?

So one can speculate that because smoking stimulate the nail matrix to grow faster, it might do similarly on the hair matrix and bone marrow cells making them grow much rapid than usual. These thoughts need to be considered and answered.

REFERENCES