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Association of dermatoglyphic peculiarities with dental caries in preschool children of lucknow city

Ekta Singh

Inderprastha Dental College, India

Background: Dermatoglyphics refers to study of the intricate dermal ridge configurations on the skin covering the palmar and plantar surfaces of hand and feet. The basis of considering dermatoglyphic patterns as genetic marker for dental caries is that the epithelium of finger buds as well as enamel have ectodermal origin, and both develop at the same time of intrauterine life.

Aim: To assess the relationship between fingerprint patterns and dental caries among pre-school children of Lucknow city.

Methodology: This study was of cross-sectional design. The study group comprised of 512 preschool children of 2-6 years of age. The prevalence of caries was recorded using "Dentition status and treatment needs" (WHO basic oral health assessment form 1997). They were divided into three groups as follows: Group-I (dmft score=0-2), group-II (dmft score=3-4) and group III (dmft score≥5). The handprints of each child were taken using a stamp pad. The fingertip patterns were analysed according to the classical method and were classified according to the topological method. The frequency of occurrence of type of dermatoglyphic pattern on fingertip of each digit was noted.

Results: Subjects belonging to group-II & group-III showed maximum occurrence of whorl pattern on all digits. Group-I subjects had maximum occurrence of arch pattern. All the variables had statistically significant value, with a degree of divergence of specific dermatoglyphic patterns among all three groups.

Conclusion: The dental caries susceptibility of an individual increased with incidence of whorl pattern and it decreased with incidence of arch pattern.

ektasingh321@yahoo.com

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