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COMPARATIVE ANALYSIS OF LIP AND FINGER PRINT PATTERNS FOR SEX DETERMINATION

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Fingerprint evidence, is undoubtedly the most reliable and acceptable evidence for individual identification, till date, in the court of law. Finger print patterns are also used for gender identification. Cheiloscopy prints are also used for gender identification, however, unlike fingerprints, unanimity still does not exist between investigators to accept cheiloscopy as a method of gender identification.

Aims: Determination of sex of an individual from (1) lip print patterns, (2) finger print patterns and (3) comparison of the two methods in sex determination.

Methodology: Lip prints and finger prints of left thumb were obtained from 89 (43 males and 46 females) subjects included in the study. The lip prints were analysed according to Vahanwala et Al. classification and finger prints were analysed according to the results by Patel Z et al. The predicted genders were compared with actual genders of all the subjects. The results were statistically analysed.

Results: Lip print analysis had higher specificity (69.6%), positive predictive value (68.9%) and negative predictive value (72.7%) for gender identification over finger prints.

Discussion & Conclusion: Finger print analysis is accepted as evidence in courts of law, while cheiloscopy evidence is not. However, in instances where only dermatoglyphic pattern recognition is feasible, our study shows that gender identification from lip prints is more reliable than from finger prints. Thus our study emphasizes the importance of cheiloscopy evidence for sex determination in forensic odontology.

KEYWORDS: Forensic Odontology, Lip print, Sex determination.