



Short Communication

OCCURRENCE OF CLASS CHARACTERISTICS ON HYPOTHENAR AREA OF PALM PRINTS IN WESTERN POPULATION OF UTTAR PRADESH

Amit Chauhan*

Amity Institute of Forensic Science, Amity University Sec-125, Noida (U.P.), INDIA.

*Corresponding Author: Email amit_chauhan777@yahoo.in

(Received: May 11, 2015; Accepted: June 17, 2015)

ABSTRACT

Emphasis of palm prints has a very special implication in identification of suspects; because of its uniqueness, perpetuality and individuality similar like fingerprints which remains uninterrupted since birth to death. Palmprints is known as an emerging influential mean for personal identification with higher confidence and has been used as a non-erring identity for the exclusion of suspects. For this study, the lateral palm prints of the Western population of Uttar Pradesh were studied to get information about the occurrence of class characteristics in the hypothenar area of palm prints.

Keywords: identification, mean, characteristics, exclusion, prints.

INTRODUCTION

In modern era, Identification on an individual concerns by the physiological essence such as fingerprints, palm prints, iris and other features which has set a unique identity and are considered a potential technique. Partial palm prints are said to constitute approximately 30 per cent are recovered from the scene of occurrence. Palm is the region between wrist and fingers and the palmar surface of hand contains many line and characteristics such as principal line, ridges, wrinkles, bifurcation dot, etc. because of enormous shallow and abundance of characteristics robust to noise and to be very highly individual and have a very high possibility to occurrence on the objects which comes in the contact of hand. Even when an individual writes, works on art or literature, daily uses things; the shallow of palm is unknowingly touches the objects and left the impressions on the shallow which may be present in discrete form such as latent or visible. Identification of suspects is made on the basis of the class

and individual essence which are important to minimize the list of suspects. This study was conducted to notice the occurrence of class characteristics in the palm prints specially the lower part of palm (Hypothenar area) which are mostly contracted to the objects such as questioned documents (below the writing), pots, door lock, car starring, daily usage things etc. whose results could play a vital role in the investigation and identification of suspects. If such type of prints encountered at anywhere then it will be an estimation that this will be from the Palm and hypothenar area.

Material and Methods

For this study, 50 samples of palm prints were collected from District- Baghpat (Ramala, Kirthal, Barout) western population of Uttar Pradesh. Sample selection was done randomly and consent was taken from the subjects. All subjects were asked to wash their hand and dry them so that the dust and other atmospheric contamination couldn't affect the prints which later on were taken with the help of

fingerprint slap on the A4 size white sheet. All samples were studied with help of hand lens 5X.

Result and Discussion

Since Palm prints is emerging as a evidence in field of intensification and often searched at the scene of occurrence, questioned documents and other aspects. When the samples were carefully evaluated, it was found that the occurrence of individual essence except principal line such as bifurcation, ridge ending, short ridge, dots, etc was presence which are individual to each and every while the class characteristics (Arch, Whorl, Loop) was absence. It makes palm prints a favourable feature used for identification. In hypothenar area (Lower part of palm), all the ridges enters from the main principal lines and exits towards the ulnar side of the palm either by bifurcating at the end or ridge ending, or in wrinkle form, but each and every exit form an individual essence in form of identity. If such type of essence are

studied properly, the principal lines at the lower part of thenar area and between the inter-digital pad IV present a significant values, that is either can be measured or the ridge counting can be done when compared to the specimen. So many studies have been carried out earlier related to the ridge counting in a specific parameter such as 5mm².

Conclusion

Palm prints are a potential evidence for personal identification which shares most of the discriminative essence similar like fingerprints and posses a large area in comparison of other shallows and the analysis of ridges can be used in comparison since it is unique and persist for human. Implementation of such type of prints on documents and other surfaces can contribute in identity of suspect and will make easy to identify the exact location of prints and will improve the efficiency for forensic applications if done with an accurate and careful performance.

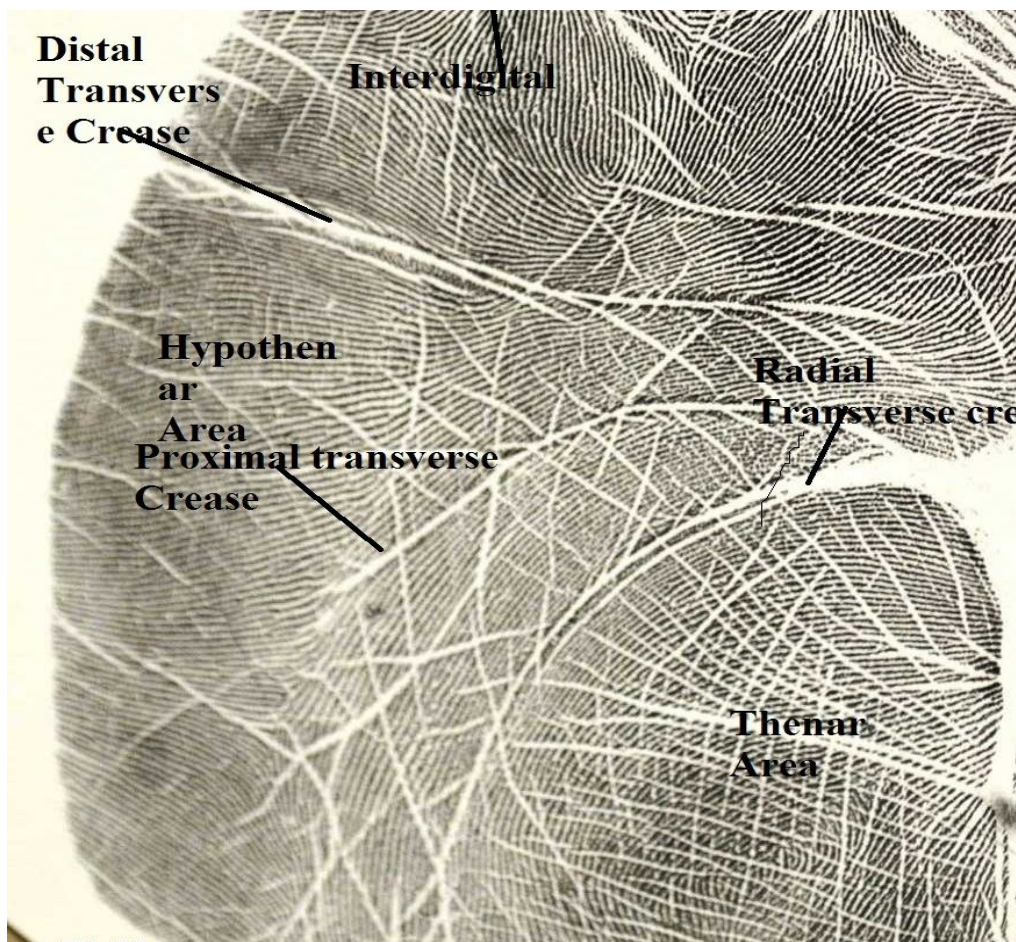


Figure 1 Palmar shallow between inter-digital area and wrist showing the different areas of palm along with the main principal lines.

REFERENCES

1. George A., Karthick G., Harikumar R. (2014); An efficient system for palm print recognition using ridges, International computing applications, international conference on Computer applications, Pp- 249-253.
2. Patil Vikas Mayur, Mukseh Kiran, Santwana S., Umale J.S. (2015) ; Parallel palm print identification on GPU, International journal of advanced research in computer and communication engineering, Vol. 4 (1), Pp 261-264.
3. Dale M.P., Galiyawala Hiren, Joshi M.A., (2010); A new bimodal identification based on hand geometry and palm print, thinkquest , Pp 86-91.
4. Qiao Y., Wang Li Z., Zeng Y., Liang K. (2005); identification of palm print using dematroglyphics analysis and detection system, Medical engineering Physiological, Vol. 27 (3), Pp 22-35.