F44   Cheiloscopy as a Reliable Tool in Human Identification

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After attending this presentation, participants will have a ''modern" look at cheiloscopy. Lip prints study was neglected in the past. The author wants to revive this useful tool in human identification.

This presentation will impact the forensic science community by giving a fresh look of cheiloscopy. Using modern technology will help push the limits of lip prints study.

Cheiloscopy (from Greek cheilos, lips and skopein, see) is the name given to the lip print studies. Many techniques exist to establish a person's identity. DNA, finger prints and dentition are the most reliable methods to identify a human being. Like finger prints and palatal rugae, lip prints are unique to one person. They are permanent and unchangeable. Lip groove patterns are visible as early as the sixth week in uterine life. Lip grooves rarely change through life. Lip tissue can resist many afflictions such as herpetic lesions. Only burns and pathologies that damage the lip subtract can permanently affect the lip's unique characteristics and rule out cheiloscopy study.

This paper reviews the different aspects of lip print studies. First, a historical review of cheiloscopy will demonstrate that lip print studies started as early as 1902 with the biological description of lip patterns by Fischer. Later in the century, cheiloscopy was used in criminology. In the 1950's, the possibility of using lip prints in the matter of human identification was developed. Santos, in 1960 was one of the first to suggest that lip patterns could be classified. Renaud, in 1972, with a huge study of 4000 lip prints confirmed the singularity on the human lip patterns. In 1974, Suzuki and Tsuchihashi developed a new classification for lip prints. They conclude not only lip prints singularity but also the response of the lip tissue to different trauma. After healing, the lip pattern returns to the initial state.

The second part of this presentation refers to an anatomical description of the lips. Differences with sex and race will be discussed and analyzed.

An overview of the different classifications of lip patterns will be discussed in the third part of the presentation. Santos, Suzuki and Tsuchihashi, Renaud, Afchar-Bayat, and Domingues will be explained.

Following the theorical review of lip prints history and classification; some techniques of lip print lifting will be explained. The major difficulties of lip print lifting and transfer will be developed and carefully analyzed. Photography, recording, and analyzing of lip prints will also be discussed. The use of Photoshop® will demonstrate the possibilities of lip print photograph enhancement.

This paper is the first chapter of several other fields of cheiloscopy. Future articles will discuss different techniques of lip print comparison.

Cheiloscopy, like bite marks study is an inexact science. With careful recording and analysis, lip prints can be a reliable tool when other techniques are not possible to perform.

Cheiloscopy, Lip Prints, Odontology