

Cheiloscopy in Transgenders

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Abstract

Most transgenders in India reside in secluded or in outskirts of society with very low status; they are often addressed in a very derogatory manner by the society. The Indian sub-continent displays a variety of studies undertaken by the cheiloscopy experts and most researchers could differentiate the two genders due to their characteristic lip pattern. Many of them carried out double blind study in order to identify the gender on the basis of lip-patterns identified by them. But the “third gender” was left out and never taken into consideration.

Present cheiloscopy study throws light on various lip-patterns present in them and whether they have characteristic patterns. The paper also reviews the relevance of various studies undertaken in Indian Subcontinent, social problems existing in transgenders and further explains cheiloscopy relevance in forensics

Keywords: *transgender, eunuchs, lip-prints, cheiloscopy, Suzuki's classification*

Introduction & Background

Magnus Hirschfeld (1868-1935) the famous German sexologist had coined the words transvestites and transsexuals at the beginning of the 20th century. Virginia Prince coined the word transgenderism which includes both transsexualism and transvestism ^[1] Transgenders, in general are genetically, biologically and physiologically men who may or may not have undergone sex-change surgeries or self-inflicted castration. They are also called eunuchs, transgenders, transsexuals and transvestites in English and colloquially hijras, alis, kothis, double deckers and panthis in India ^[2,3]. In India they are considered as the “third gender,” - neither male nor female. As quoted by Saxena et al., in their article, eunuchs are physiological males who have a feminine gender identity, adopt feminine gender roles and wear women's clothing^[4]. Hence, a eunuch (noun/Greek: Eunoukhos) is defined as a man who has been castrated (especially in the past), and is employed

to guard the women's living areas at an oriental court^[5] A transgender (adjective) relates to people who have a sexual identity that is neither clearly male nor clearly female or relating to or being a person (as a transsexual or transvestite) who identifies with or expresses a gender identity that differs from the one that corresponds to the person's sex at birth^[6]

Scenario of Transgenders in India: Most transgenders in India reside in secluded or on outskirts of society with very low status; they are often addressed in a very in a very derogatory manner by the society. The Indian lawyer and author Rajesh Talwar has written a book highlighting the human rights abuses suffered by the community titled, ‘The Third Sex and Human Rights ^[7]. Few employment opportunities are available to them.

In 2014, Justice KS Radhakrishnan ^[8] declared transgender to be the third gender in Indian law, in a case brought by the National Legal Services Authority (Nalsa) against Union of India and others. The ruling said: *Seldom, our society realises or cares to realize the trauma, agony and pain which the members of Transgender community undergo, nor appreciates the innate feelings of the members of the Transgender*

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community, especially of those whose mind and body disown their biological sex. Our society often ridicules and abuses the Transgender community and in public places like railway stations, bus stands, schools, workplaces, malls, theatres, hospitals, they are sidelined and treated as untouchables, forgetting the fact that the moral failure lies in the society's unwillingness to contain or embrace different gender identities and expressions, a mindset which we have to change.

Justice Radhakrishnan [9] also mentioned that transgender people should be treated consistently with other minorities under the law, enabling them to access jobs, healthcare and education. He framed the issue as one of human rights, saying that, "These TGs, even though insignificant in numbers, are still human beings and therefore they have every right to enjoy their human rights", concluding by declaring that:

*Hijras, Eunuchs, apart from binary gender, be treated as "third gender" for the purpose of safeguarding their rights under Part III of our Constitution and the laws made by the Parliament and the State Legislature.

*Transgender persons' right to decide their self-identified gender is also upheld and the Centre and State Governments are directed to grant legal recognition of their gender identity such as male, female or as third gender.

Sensitized by all the above landmark orders to protect this sect, we decided to carry out a cheiloscopy study of this particular population.

Studies on lip-prints: Cheiloscopy was first suggested in 1950 and studies were carried out on lip prints in 1960's and early 1970's. Lip-print identification has been utilized in court and last 20 years has seen lot of research all over world attempted in the field of forensics. [10, 11, 12, 13, 14, 15, 16,17, 18, 19, 20]. Most of the studies were based on Suzuki's Classification, though few of them described as wrinkles/grooves with their peculiar shapes. It did show a property of uniqueness and did not change over the life-span of an individual, thus beholding a potential for personal identification similar to the finger-prints. The studies appeared to be popular as it was non-invasive to procure the prints from the lip. The prints obtained could be identified and classified with great ease using a magnifying lens. Many studies were carried out to evaluate intra-researcher difference of opinion too. The studies generated great interest that a study undertaken to evaluate the differences of lip prints even in uniovular twins [20].

Some of them took up studies to distinguish between the males and females in a given population. Studies carried out for gender determination among the Indians which are expressed in Table 1.

Table 1: Showing the studies done in Indian sub-continent to differentiate gender with cheiloscopy:

Researcher	Year	Population of study	Pattern Dominant in females ♀	Pattern dominant in males ♂
Sivapathasundaram ^[21]	2001	Tamil Nadu	Type III	Type III
Manipady ^[22]	2001	Karnataka	Type II	Type II
Vahanwala et al ^[23]	2005	Maharashtra	Type II	Type III
Gondivkar ^[24]	2009	Maharashtra	Type II	Type III
Sharma P et al ^[25]	2009	Uttar Pradesh	Type I Type I'	Type IV
Verghese A.J. et al ^[26]	2010	Kerala	Type IV	Type IV
S.Patel, Ish Paul ^[27]	2010	Rajasthan	Type II	Type I
Rohit M et ^[28]	2011	Uttar Pradesh	Type I Type I'	Type IV Type V
P.Rastogi ^[29]	2013	Mangalore	Type I Type I'	Type II, III, IV, Type V
Dongarwar et al ^[30]	2013	Maharashtra	Type I Type I'	Type IV Type V
Koneru A ^[31]	2013	Kerala & Manipuri	Type I Type I'	Type IV Type V

Cont... Table 1: Showing the studies done in Indian sub-continent to differentiate gender with cheiloscopy:

M.Kinra, Ramalingam ^[32]	2014	Rajasthan	Type I Type I' Type II	Type III Type IV
Kaul Rachna ^[33]	2015	Karnataka	Type I	Type I
S.Bharathi et al ^[34]	2015	Tamil Nadu	Type I A	Type II
P Kesarwani ^[35]	2017	Hazaribagh	Type I Type I'	Type IV Type V

The Indian sub-continent displays a variety of studies undertaken by the cheiloscopy experts. Table I, as marked in colored boxes reveals that most researchers could differentiate the two genders due to their characteristic lip pattern. Many of them carried out double blind study in order to identify the gender on the basis of lip-patterns identified by them. But the “third gender” was left out and never taken into consideration. Since various Bills have been provided for the establishment of welfare boards at the Centre and state level and for transgender Rights Courts- we have to accept these individuals as part and parcel of our society and hence studies need to be done on them. Using the lip-print pattern for identification of a person is one of the unique practices that can be used as a weapon for personal identification of an individual, have unique pattern combinations and do not change during the life of a person. The present study is an attempt to identify the dominant patterns on the basis of Suzuki’s Classification, seen in the transgender population. Inclusion of this sect in our population study will give a proper direction in the field of forensics.

Aims and Objectives:

1. To classify the obtained lip-prints according to Suzuki’s classification.
2. To identify which type is pre-dominant among this population.
3. To gauge whether they have patterns more like males or more like females.
4. To estimate whether cheiloscopy proves to be a tool for identification of this population

Materials and Method

Fifty self-identified eunuchs residing in the city Mumbai and Navi Mumbai were a part of this study. The lip-prints were acquired by dabbing a cellophane tape

against the lips which were applied with glossy, single-use lipstick which was bright color. Care was taken no lesion active or passive were present in the vicinity of the lips. The lip-prints on cellophane tape, was then stuck to a bond paper to facilitate analysis. Each pattern was evaluated using magnifying lens quadrant-wise by two observers, so that no pattern is missed out. Suzuki’s Classification adopted by most researchers was used by us to assign the type of lip pattern.

Observation and Results: Fifty evaluated lip-patterns analyzed using Suzuki’s classification revealed:

LIP PATTERNS IN TRANSGENDER POPULATION

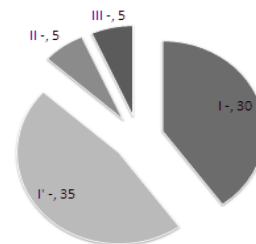


Figure1:

Figure1 shows vertical complete and incomplete grooves, Type I and I’ were commonly observed in the upper anterior region i.e. in first and second quadrant which were distinctly identified [60%]. Type II was observed commonly in the second quadrant occurred sparingly [5%]. Type IV was not observed at all. Some patterns were confusing as the observer many times could not differentiate between two lip-patterns- the type could not be ascertained

Other than the lip-prints it was observed that this population thrive in very poor conditions, may contract various diseases due to varied sexual practices and poor means to sustain a decent livelihood. The oral hygiene

was in general poor. Most of them had stained teeth and reported of drug, tobacco or alcohol abuse.

Discussion

Contemporarily the Government of India introduced so many welfare policy and schemes such as census, documentation, issuing of the citizenship ID Cards, issuing passports, socio-economical development and constitutional safeguards for the transgender people. The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is a major initiative of the 11th Five Year Plan period which brought employment opportunities for transgender people. The Ministry of Housing and Urban Poverty Alleviation takes care of the National Urban Livelihood Mission and Healthcare facilities for them. The social, economic, political transformation, housing, legal measures, police reforms, legal and constitutional safeguards to prevent human rights violations of the transgender community and institutional mechanisms to address specific concerns of transgender individuals.

The effects of their lifestyle on various dental diseases such as dental caries and periodontal disease can be studied. Such studies would provide baseline data on which the government can implement future plans to improve their oral health in particular and their general well-being. In the present study, I and I' were common lip-patterns observed. Type II was observed sparingly, but in the lower lip. Type IV was not observed at all. Vahanwala S.P. et al [23] observed that the patterns dominant in female are Type I, I' and II. Type III is the signature pattern observed in males. On the whole, male patterns are complicated and one can make an error or stay undecided about the gender determination by cheiloscopy method. Hence the result is expressed as such. Observing the Table I closely, most researchers have identified Type I and I' as the commonly occurring pattern in the population. Maximum studies reveal that the patterns are such that the genders can be gauged by assessing the lip pattern types

In forensic science, the effect of their sexual behavior on oral tissues, their past violent experiences, trauma and injuries in relation to their face and oral cavity could be investigated. Peeran & Ramalingam^[36] have expressed that: Being a eunuch is a dispositionally acquired characteristic behavioral pattern seen uncommonly in biologically born men much later in their lives. To the

best of our knowledge, no true transgender survives. Hence, the comparison of genetic characteristics such as rugae patterns, finger prints, or lip prints among men and eunuchs-castrated men or men who behave in a feminine way does not have a scientific rationale, as both are physiologically men in nature. The present study suggests that the transgender population has to be still studied in depth with a greater sample size.

Conclusion

The patterns in cheiloscopy sometimes mimic each type which may lead to allocating a wrong pattern to the groove. The combination occurring in each region appears to be unique and at the same time the inter-pattern distance would vary. All these parameters make the theory of uniqueness make Cheiloscopy crucial in forensics. The present study carried out on transgender population shows that they do not show any unique pattern from others. Comparative evaluation of rugae patterns, finger prints, or lip prints among men and eunuchs-castrated men or men who behave in a feminine way does not have a scientific rationale since both are physiologically men and hence showed Type I and I' predominant in nature.

Conflict of Interest- NIL

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Ethical Clearance – Taken from Institutional Review Board.

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