



RESEARCH ARTICLE

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## VARIATION OF CHEILOSCOPY AND BLOOD GROUPS AMONG TRIBAL BELT PHYSIOTHERAPY COLLEGE STUDENT IN CHHATTISGARH

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### ABSTRACT

**Background:** This research was established that the frame up of lines on the red pink part of human being, lips is individual and unique for each human being. The present research was maneuver by precedent researches on a fraternity between cheiloscopy and blood group. **Aim:** To study of cheiloscopy and blood group among tribal students. **Materials and Methods:** The present research was conducted in tribal belt Government Physiotherapy College in Chhattisgarh, India. We obtained students were 350, 127 male and 223 female randomly, age range between 17 and 25 years. This research was Students selected those family, parents; grandparents are tribe belongs to Chhattisgarh state; cheiloscopy research did according to Tsuchihashi's<sup>7</sup> classification and blood group collected according to Landsteiner ABO system. **Result:** In this research we found out of 350 students, maximum students in 20 to 22 age groups was 124 and most common blood group in tribes students was 180 "O" and least common blood groups was "AB", 333 belongs to Rh positive and 17 belongs to Rh negative. Cheiloscopy most common pattern we found II types 55.42% and least common pattern was V 1.4%. **Conclusion:** cheiloscopy was the conceivable to identify the gender races and identity of the individual, as they remain stable throughout life and unique for individual, even in twins and family relatives and traits. Our research fruitful in future could gain more anthropological significance, forensic expert, and anatomist.

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## INTRODUCTION

The grooves present on human lips sulci labiorum were unique to each person this can be used to determination of identification of person (Rohit, 2011). Anthropologists R.Fischer in 1902 was the first scientist to describe it as a bio-optical phenomenon (Vahanwalla, 2005). Lip prints define as normal lines and fissures in wrinkles form and grooves present in the zone of transition of human being lip, between the inner labial mucosa and outer skin, examination lip known as cheiloscopy, lip unique for individuals, as finger prints (Saraswathi, 2009). In a crime scene investigation, lip prints were obtained in specific location like cloths, glasses, cups, cigarette butts<sup>4</sup>. Identification of any one an individual, living or dead was based on the any record that all individuals were unique, individual identification will be increasingly important not only in legal medicine but also in criminal investigation, Genetic Research (Reidar, 1977). In 1901 Karl Landsteiner was discovered blood group system, 19 major

groups had been identified which various in their frequency of distribution among various races of human being. In clinically 'ABO' and 'Rhesus' groups are used, 'ABO' system again divided into according to presence of corresponding antigen in plasma as A, B, AB, O blood group types. 'Rhesus' system is also classified into according to the presence or absence of 'D' antigen as 'Rh +ve' and 'Rh - ve' (Bijlani).

## MATERIALS AND METHODS

The present research was carried out in tribal belt Government Physiotherapy College in Chhattisgarh, India. Students were 350, 127 male and 223 female randomly age range between 17 and 25 years. In this research were Students selected those family, parents, grandparents are tribe belongs to Chhattisgarh state, student were explain all procedure and take consent. Blood groups of all the students were identified using antiserum A, B and D and blood group data were collected. Those with any disease, deformity, lesion in lips and any blood group disorder were excluded from the research. In students

lipstick was applied in a single motion, gently rub his or her lips together to spread the lipstick evenly, strip of cellophane tape was applied on the lip than cellophane was stuck on to a piece of white A 4 size paper and grooves were classified according to Tsuchihashi's<sup>7</sup> classification from types I to V, frequency of each type of lip print was percentage, tabulated and calculated. 1. Type I: Clear-cut vertical grooves that run across the entire lips. 2. Type I': Similar to type I, but do not cover the entire lip. 3. Type II: Branched grooves, branching Y-shaped. 4. Type III: Criss-cross pattern, reticular grooves. 5. Type IV: Undetermined.

## OBSERVATION AND RESULTS

We studied 350 tribe's students with known blood groups. We observed (table – 1), total male students was 127 (36.28%), female was 223 (63.71%). maximum students were related to 20 to 22 age groups 124. In this research (table -2) most common predominant blood group among tribes students was 180 "O" blood group, 56 male and 124 female than "B" group 108, 40 male 68 female followed "A" blood group 34, 20 male and 14 female, least common blood group in tribes students was "AB" blood group 28, 11 male 17 female. Out of 350 students (table – 3) 333 belongs to Rh positive, 17 belongs to Rh negative and most commonest blood group was "O" blood group, least common group was "AB" negative. We obtained (table – 4) most common pattern of cleilosophy was II, 194 (55.42%) in male 75 (21.42%) and female 119 (34%) than I, 96 (27.42%) in male 25 (7.14%) and in female 71 (20.28%), least common pattern was V mixed indefinite, 5, in male not obtained any cases and in female 5 (1.4%).



Image 1

Table 1. Distribution of age and gender wise case among tribe's students

Age in year	Male	Female	Total
17 - 19	39	59	98
20 - 22	70	124	194
23 - 25	18	40	58

Table 2. Tribe's students distributed according to gender and blood groups

Blood group	Male %	Female%	Total %
A	20 (5.7%)	14 (4%)	34 (9.7%)
B	40 (11.4%)	68 (19.4%)	108 (30.8%)
AB	11 (3.1%)	17 (4.8%)	28 (8%)
O	56 (16%)	124 (35.4%)	180 (51.4%)
Total	127 (36.98%)	223(63.71%)	350 (100%)

Table 3. Tribe's students distributed according to blood groups and Rh factor

Blood group	Rh factor		Total
	Rh positive	Rh negative	
A	30 (8.5%)	4 (1.1%)	34 (9.7%)
B	105 (30%)	3 (0.85%)	108 (30.8%)
AB	27 (7.7%)	1 (0.28%)	28 (8%)
O	171 (48.8%)	9 (2.5%)	180 (51.4%)
Total	333 (95.1%)	17 (4.85%)	350 (100%)

Table 4. Distribution of lip pattern among tribes students

Lip pattern	Male	Female	Total
I long vertical	25 (7.14%)	71 (20.18%)	96 (27.42%)
I' short vertical	13 (3.71%)	11 (3.1%)	24 (6.65%)
II branched	75 (21.42%)	119 (34%)	194 (55.42%)
III intersection	10 (2.83%)	7 (2%)	17 (4.8%)
IV rediculate	4 (1.14%)	10 (2.8%)	14 (4%)
V Mixed indefinite	0	5 (1.4%)	5 (1.4%)
Total	127 (36.28%)	223 (63.71%)	350 (100%)

## DISCUSSION

Identification of person as early as 6th week of intrauterine life, they were permanent, unchangeable even after death, and even unique to each person except in monozygotic twins, and the pattern change very rarely in the life long. post dead cadaveric lip prints does not change, the major issue in lip print analysis was blemish and this problem short out by using a good quality lip stick. Lip print pattern five types based on the Tsuchihashi's classification, lip print at the scene of crime or any suspected place could be a basis for eventuality as to the character of the incident, we presumption the number of people involved, gender, cosmetics used by persons, habits, occupational, traits and the any pathological changes of lips. The F.B.I. and the Illinois State Police considered that lip prints were unique as like as fingerprints useful in positive means of identification (Satyanarayana Naik, 2011; Lip print identification anyone). Sivapathasundaram (Sivapathasundharam, 2011) found that Type –III, Saraswathi (Saraswathi, 2005) found Type-III, Gondivkar (Gondivkar, 2009) found type III, Verghese (Verghese, 2011) found Type-IV & V. In our present research we observed most common pattern of cleilosophy was II, 194 (55.42%) in male 75 (21.42%) and female 119 (34%) than I, 96 (27.42%) in male 25 (7.14%) and in female 71 (20.28%), least common pattern was V mixed indefinite, 5, in male not obtained any cases and in female 5 (1.4%).

Sajad Hamid (Sajad Hamid, 2016) found blood group "B" 38% was predominantly found among the subjects followed by "O" & "A" 24%. Ekanem A.U. et al (Ekanem, 2014) found on 400 individuals found that majority of the subjects belonged to "O" group. U. N. Umaraniya et al (Dr. Y. U. Umraniya, 2011) found in his study on MBBS students in majority of students had blood group O and least was "AB". A. D. Patil et al (A. D. Patil, 2014) found on medicos showed high frequency of blood group "O" and low of "AB". D Bhavana et al (D

Bhavana, 2013) and S. K. Rolati et al (S. K. Rolati, 2013) found subsequent study in Maiduguri metropolis that rhesus +ve was the highest number of individuals with blood group "O" +ve having more than 50% of the population. Bharadwaja et al<sup>21</sup> found blood group AB, Rh positive 43.34%, Rh negative 60%. In our research most predominant blood group among tribes students was 180 "O" blood group, 56 male and 124 female, least common blood group in tribes students was "AB" blood group 28, 11 male 17 female. Out of 350 students, 333 belongs to Rh positive, 17 belongs to Rh negative and most commonest blood group was "O" blood group, least common group was "AB" negative.

## Conclusion

This research was in tribes students to find out cheiloscopes and blood group, Majority of tribes students belongs to Rh-positive and "O" blood group and least common in "AB" blood group. II lip pattern were the frequently and V were least pattern. Our research fruitful in future could gain more anthropological significance, forensic expert, and anatomist.

**List of abbreviations:** None declared.

**Competing interests:** We have no competing interests.

**Author's contribution:** Dr. Rajni Thakur has made to conception, procedure, drafting the manuscript, convert images in JPG file, tabulation Dr. Deepti Gautam has made collection of sample, revising manuscript, arrange the image.

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