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A Cheiloscopic Study On Diabetes Mellitus Type-2 Patients With Reference To Deha Prakruti (Body Constitution).

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ABSTRACT:
Introduction: Diabetes mellitus (DM) is a global disease, and the prevalence is increasing particularly in developing countries. It represents a major threat of the public health condition worldwide. According to AYURVEDA, Prakruti Pareeksha(Examination of Body Constitution) is one of the prime parameter for examination of body and also held at high esteem when it comes to diagnosis of diseases. So based on the information gathered through Prakruti Pareeksha and Cheiloscopy, an effort is made to PREVENT the incidences of Diabetes Mellitus.
Methodology: A study was conducted among previously diagnosed 50 Type 2 Diabetes mellitus patients from various hospitals, Mysuru. The prakruthi is assessed using Quesstionare. Lip prints were collected and analyzed with prakruti.
Results: As per the observations it is found that the out of 50 samples majority of Pitta-kaphaja prakruthi (36%) individuals and also predominance with Reticular (27%) and complete straight (26%) pattern of lip prints are more prone to Type 2 Diabetes Mellitus.
Conclusion: Diabetes mellitus (DM) is a global disease, and the prevalence is increasing particularly in developing countries.Prakriti Pareeksha is one of the prime parameter for examination of body and also held at high esteem when it comes to diagnosis of diseases. This is a pilot study with 50 samples there is further lot of scope for study towards achievement of accuracy with bigger sample data and considering various other Cheiloscopic criteria.

Key words: Diabetes mellitus, Cheiloscopy, Lip prints, Prakruti.

INTRODUCTION:

Diabetes mellitus (DM) is a global disease, and the prevalence is increasing particularly in developing countries. It represents a major threat of the public health condition worldwide. Recent studies indicate that there were 171 million people in the world with diabetes in the year 2000 and this is projected to increase to 366 million by 2030. The vast majority of cases of diabetes fall into two broad etiopathogenetic categories – type I DM (T1DM) and T2DM. Clearly, T2DM has become an epidemic in the 21st century where India leads the world with the largest number of diabetic patients. Some studies suggest that Indians are apparently genetically more prone to diabetes and insulin resistance. [1,2]
PRAKRUTI (Body Constitution) is formed based on dominant dosha at the time of fertilization, which greatly influences physical & physiological state of an individual and it remains unaltered during one's life. Hence study of prakruti plays a major role in examination of patient for diagnostic aspects & prevention also.[3,4]
The study of lip prints is referred to as CHEILOSCOPY. The word CHEILOSCOPY is derived from the Greek words, "cheilo" meaning lips and "skopein" meaning to see. Lip prints are unique and do not change during life of a person. Lip print pattern is an anatomical character of the human lips, which may be useful in identification and diagnosis of congenital diseases and anomalies.[5]
Here the role of assessment of PRAKRITI and Cheiloscopy becomes clear. According to AYURVEDA, Prakriti Pareeksha is one of the prime parameter for examination of body and also held at high esteem when it comes to diagnosis of diseases. So based on the information gathered through Prakriti Pareeksha and Cheiloscopy, an effort is made to PREVENT the incidences of Diabetes Mellitus.
Hence, the need for proper understanding of this Diabetes Mellitus in the light of Prakriti & cheiloscopy is observed in view of preventing, predicting, and anticipation of Diabetes Mellitus in future. Hence, the need for proper understanding of association between Prakruti and lip print patterns and to identify various lip print patterns in different prakruti is observed in view of preventing, predicting, and anticipation of various conditions like hypertension, Diabetes etc in future.

METHODOLOGY:

a) A study was conducted among Previously diagnosed 50 Type 2 Diabetes mellitus patients from various hospitals, Mysuru.
b) The prakruthi is assessed based on the 25 number of traits (along with 37 subtraits) and attributes predominating among tridosha. A Quesstionare is set and prakruthi is assesed.

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C) Lip prints are collected using Tsuchihashi and Suzuki classification.[6]

- Type I: Clear-cut vertical grooves that run across the entire lips (complete straight pattern)
- Type I': Similar to Type I, but do not cover the entire lip (Partial straight pattern)
- Type II: Branched pattern
- Type III: Intersected grooves Type IV: Reticular pattern
- Type V: Grooves do not fall into any of Type I-IV and cannot be differentiated morphologically (undifferentiated pattern)

d) A proforma was prepared (containing name,age,sex, address)on a durable white paper, Care was taken to select patients having no lesions on lips. Patients with known hypersensitivity to lip colours were not included in the study.
A dark coloured lip colour (Lipsticks) was applied with a single stroke, evenly on vermillion border. The subjects were asked to rub both the lips to spread the applied lip colour. After 2 minutes, Lip prints were carefully collected on A4 sized executive bond papers after obtaining subject consent and Collected Lip prints were covered with cello tape. This served as a permanent record and then they were subjected for detailed analysis with the help of magnifying hand lens.
e) Collection of % of traits to find out the predominating Deha prakruthi.
f) The lip prints were analyzed to observe the exclusive pattern in previously diagnosed Type- 2 Diabetes mellitus patients.

Figure.1: Collecting lip print

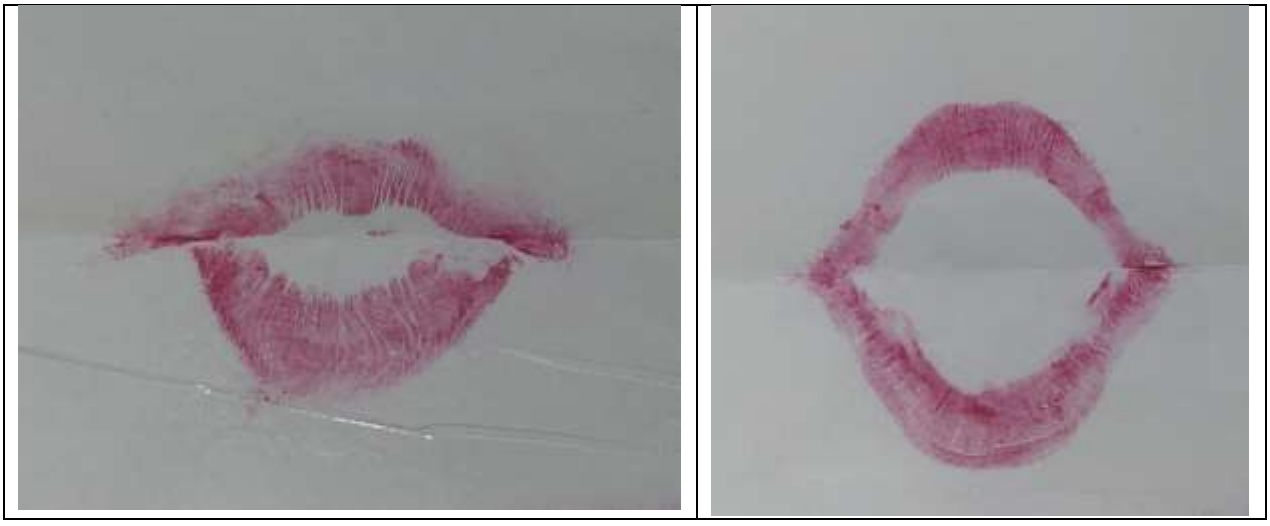

Figure 2: Collected lip prints patterns.

RESULTS:

Among this different sub-varieties of lip prints the general classification is taken into main consideration ie., complete straight, partial straight, Branched, Intersected, Reticular, Undifferentiated and then sub category is studied in brief.
Among 50 samples the percentage of the percentage of complete straight pattern is 26%, the percentage of Partial straight pattern is 11%, the percentage of branched pattern is 22%, the percentage of intersected pattern is 5%, the percentage of reticular pattern is 27%, the percentage of undifferentiated pattern is 9%.

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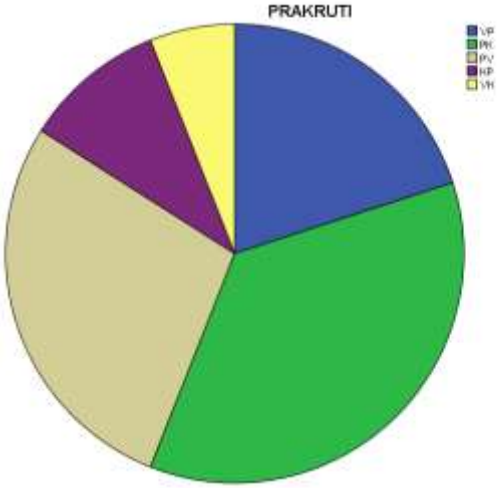
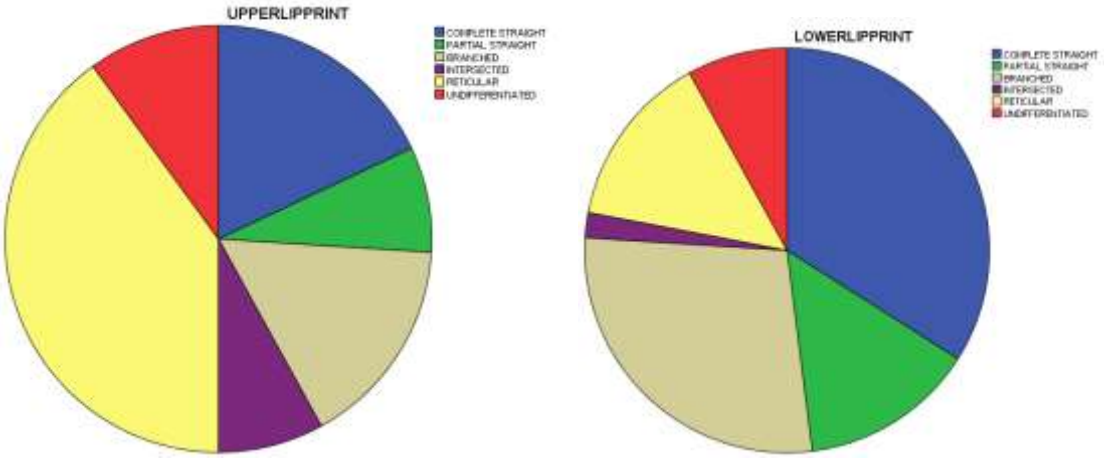
Among 50 samples, in upper lip prints, the percentage of complete straight pattern is 18%, the percentage of Partial straight pattern is 8%, the percentage of branched pattern is 16%, the percentage of intersected pattern is 8%, the percentage of reticular pattern is 40%, the percentage of undifferentiated pattern is 10%.
Among 50 samples, in Lower lip prints, the percentage of complete straight pattern is 34%, the percentage of Partial straight pattern is 14%, the percentage of branched pattern is 28%, the percentage of intersected pattern is 2%, the percentage of reticular pattern is 14%, the percentage of undifferentiated pattern is 8%.
As per the observations it is found that the out of 50 samples assessed for deha prakruthi majority of them were of 36% of Pitta-kapha prakruthi, 10% of kapha-pitta prakruthi, 6% of Vata-kaphaja prakruthi, 20% of vata-pitta prakruthi and 28% of pitta-vataja prakruthi was found. And with the above statistical data gives us to understand that the majority of Pitta-kaphaja prakruthi individuals and also predominance with Reticular and complete straight pattern of lip prints are more prone to Type 2 Diabetes Mellitus and used to be strictly follow proper diet that is ahara vihara and pathya.



Graph 1: Distribution of Prakruti.



Graph 2 & 3: Distribution of Lip print patterns in upper lip and lower lip.

DISCUSSION:

Diabetes is fast gaining the status of a potential epidemic in India with more than 62 million diabetic individuals currently diagnosed with the disease. In 2000, India (31.7 million) topped the world with the highest number of people with diabetes mellitus.
Lip prints are unique and do not change during life of a person.The biological phenomenon of systems of furrows on the red part of human lips was first described by Anthropologists R. Fischer in 1902.In the period of 1968 – 1971, two Japanese scientists Yasuo Tsuchihashi and Tazuo Suzuki examined 1364 persons at the department of Forensic Odontology at Tokyo University. Based on this research, it was established that the arrangement of lines on the red part of human lips is individual and unique for each human being.In 1974, Tsuchihashi carried out another study with greater number of participants as well as family groups. By comparing the lip prints of the twins with their parents, he found that they closely resembled one parent which adds strength to the theory of heredity of lip prints. He also found that following trauma to a lip, it resumed the groove pattern after healing.[6,7,8]

Vineeth Ramanathan et al. (2020) analysed the lip print patterns of diabetic and nondiabetic individuals and demonstrated that Type 4 reticular pattern was significantly higher among diabetic patients. Thus lip prints may serve as a predictive tool in screening Type 2 diabetes mellitus.[9]
Umana et al. reported that people with a reticular and undifferentiated pattern of lip prints have a higher probability of developing diabetes, and those with branched and intersected pattern were at low risk[10]. Our study showed, the majority of Pitta-kaphaja prakruthi individuals and also predominance with Reticular and complete straight pattern of lip prints are more prone to Type 2 Diabetes Mellitus and used to be strictly follow proper diet and life style (ahara vihara and pathya).

CONCLUSION:
Diabetes mellitus (DM) is a global disease, and the prevalence is increasing particularly in developing countries.Prakriti Pareeksha is one of the prime parameter for examination of body and also held at high esteem when it comes to diagnosis of diseases. Lip print pattern is an anatomical character of the human lips, which may be useful in identification and diagnosis of congenital diseases and anomalies. So based on the information gathered through Prakriti Pareeksha and Cheiloscopy, an effort is made to PREVENT the incidences of Diabetes Mellitus.
This is a pilot study with 50 samples there is further lot of scope for study towards achievement of accuracy with bigger sample data and considering various other Cheiloscopic criteria.

Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Conflicts of interest: There are no conflicts of interest.

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