

Distribution of Plantar Creases in Relation to Anatomical Axis Among the Gond

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ABSTRACT The Gond of Sagar District, Madhya Pradesh were studied for planter creases in relation to anatomical axis. The results show that distribution of plantar creases is well marked in SMBC as compared with DMBC and TMBC, excepting the fibular incidence of DMC in both the soles among females.

INTRODUCTION

The anatomical axis of the foot passes through the second toe and second metatarsal (Pateria, 1973). Cummins and Midlo (1961) correlated this axis with syndactylism in second and third toes. Pateria (1973) examined the plantar ridge count variation with reference to the anatomical axis of the foot. However, the dermatoglyphic study in this field is scanty in India, and therefore in the present paper, the anomaly of crease distribution in soles is expressed in terms of anatomical axis.

SUBJECTS, MATERIAL AND METHODS

The samples consists of bilateral plantar prints of 90 males and 85 females of Jamunia and Chauka village of Kesli Block of Sagar District in Madhya Pradesh collected in 1987. Care was taken to exclude related individuals. The method used in taking sole prints was that of Cummins and Midlo (1961).

Those plantar creases which fall towards the fibular side of the sole are quoted as fibular type and those falling towards tibial side are called tibial type. This description is limited in its scope since it is made to explain only the occurrence of plantar creases either to the tibial or the

fibular side of anatomical axis.

RESULTS AND DISCUSSION

It is seen from tables 1 and 2 that the majority of the single medial base crease (SMBC) fall towards tibial side of anatomical axis. This is true for both the soles and sexes. On the other hand the majority of the double medial base crease (DMBC) fall towards fibular side of anatomical axis in both right as well as the left

Table 1 : Occurrence of plantar creases in relation to anatomical axis among males

Plantar Creases	Creases in tibial side				Creases in fibular side			
	Right Sole		Left sole		Right sole		Left sole	
	No.	%	No.	%	No.	%	No.	%
SMBC	44	77.19	39	54.17	15	45.45	8	44.44
DMBC	8	14.04	17	23.61	11	33.33	5	27.78
TMBC	5	8.77	16	22.22	7	21.21	5	27.78
Total	57	100.00	72	100.00	33	99.99	18	100.00

Table 2 : Occurrence of plantar creases in relation to anatomical axis among females

Plantar Creases	Creases in tibial side				Creases in fibular side			
	Right sole		Left sole		Right sole		Left sole	
	No.	%	No.	%	No.	%	No.	%
SMBC	36	72.00	31	60.78	15	42.86	9	26.47
DMBC	8	16.00	13	25.49	17	48.57	22	64.71
TMBC	6	12.00	7	13.73	3	8.57	3	8.82
Total	50	100.00	51	100.00	35	100.00	34	100.00

soles in both the sexes. It is interesting to note that the tibial and fibular incidence of DMBC is less striking among males in left sole (*i.e.* 23.61% and 27.78, respectively). However, the distribution of DMBC is strikingly higher (*i.e.* 64.71%) than the distribution of SMBC (*i.e.* 26.47%) in fibular side of left soles among females.

In case of triple medial base crease (TMBC)

a different trend is noticed. The fibular incidence is greater than tibular incidence in both the soles of males, whereas among females a reverse trend is observed.

Thus it appears that the distribution of plantar creases in relation to anatomical axis of foot is well marked in SMBC as compared with both DMBC and TMBC.

REFERENCES

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