



Dermato Glyphic Study in Cases of Epidermoid Carcinoma of Uterine Cervix in Females

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ABSTRACT

Introduction – Dermatoglyphic abnormalities have been noticed in various disease conditions. The present study is an attempt to find out the atypicalities in dermatoglyphics of uterine cancer in females. Material and methods – The study was conducted on 100 patients of epidermoid carcinoma of uterine cervix, admitted to the Jadav Ba Cancer Hospital attached to N.S.C.B. Medical College, Jabalpur (MP). The control group was formulated by 100 healthy females with no family history of cancer. Finger prints were recorded and analysed by statistical methods. Conclusion – From the current study it can be concluded that the dermatoglyphic patterns observed in the present study are quite significant, It could be utilised in early detection of disease process and advising disease prone individuals for a regular and frequent checkup, and taking of proper precautions.

KEYWORDS

Dermatoglyphics, Arches, Whorls.

Introduction :

The palmar and plantar surfaces of the human hands and feet are clothed by skin which is different from that covering other parts of the body. The skin here is continuously corrugated with narrow ridges. The ridges are present over distal part of digits also. The systemic study of these innumerable epidermal ridges is referred to as dermatoglyphics.

Abundant evidence is at hand to prove that some characteristics of finger epidermal ridges and of other dermatoglyphic areas are inherited. Similarities of dermal patterns amongst relatives, especially between monozygotic twins, difference between unrelated individuals and still greater variation between members of different races indicate that these patterns are genetically determined (Cummins & Midlo, 1961).

Dermatoglyphic abnormalities have been noticed in various disease conditions, particularly where the etiology has been traced to genetic causes. Altered dermatoglyphic traits are seen in leukaemia (Aleksandrowics et al, 1966), neurological disorders (Barbeau et al, 1965 and others), rubella (Achs et al, 1966), Indian childhood cirrhosis (Chandra, 1969), carcinoma (Rashad and Mi, 1975) and several other diseases.

The carcinoma of uterine cervix appears to be a heterogenous disease whose cause are at present unknown. An environmental, sociobiologic and physiological factors appear to be associated with increased risk of above cancer.

Dermatoglyphic analysis have been made in the context of several disease entities, little effort seems to have made to find out a relationship between dermatoglyphic features in epidermoid carcinoma of uterine cervix in females. It was therefore felt to be worthwhile in studying the dermatoglyphic features in this carcinoma which is amongst the commonest in females.

The present study, in which 100 bilateral palmar prints and 1000 finger prints of 100 cases of epidermoid carcinoma of uterine cervix in females have been analysed and compared with a normal control group of equal number, is an attempt

to find out the atypicalities in dermatoglyphics of cancer cervix in females.

Material and methods :

The study was conducted on patients admitted to the Jadav Ba Cancer Hospital attached to N.S.C.B. Medical College, Jabalpur (M.P.). The patients selected for the study were 100 females where the diagnosis of epidermoid carcinoma of uterine cervix was established. The diagnosis were duly confirmed by histopathological studies. The control group is formulated by 100 healthy females with no family history of cancer selected on the basis of having almost similar parameters as those of the patients. Factors considered were those of region, religion, caste, age, physical features i.e. weight and height and socioeconomic status. The technique described by Cummins and Midlo (1961) was followed to record dermatoglyphics. Prints were taken on glazed paper with adequate ink, optimum pressure and due care. Prints of both palms & all fingers were recorded and labelled immediately. The following parameters were studied, tabulated and analysed by statistical methods –

Finger patterns -

1. Whorls 2. Loops 3. Arches

Palms –

1. Hypothenar 2. Thenar 3. Interdigital areas I to VI

Quantitative analysis –

1. Finger ridge count 2. Axial triradii atd angle 3. Pattern intensity 4. interdigital ridge count.

Observations :

Following significant findings in female patients were found -

Increased arches in 1st finger of right hand (Table 1).

Increased patterns in interdigital area II of both hands (Table 2).

Increased main line termination of line 'C' in area V in right

hand (Table 3).

Increased C-absent in both hands (Table 4).

Based on these statistical features 5 points were accorded to each abnormality and summated abnormal dermatoglyphic rating was calculated. One could have scored maximum of 30 points but no patient scored more than 15 points.

Discussion :

As there is no literature available on dermatoglyphic studies in cases of epidermoid carcinoma of uterine cervix, an attempt has been made to compare these with studies in other cancers particularly in leukaemia and breast cancer.

Arches were increased in number in the first finger of right side. Rosner (1969) also found an increased frequency of finger tip arches in the patients of chronic lymphocytic leukaemia.

The 'D' and 'L' patterns were increased in the interdigital area 2. The total number of patterns were also increased in interdigital area 2.

The termination of main line 'C' were more in the area number 5 in the right hand.

C-absent was more in both hands.

The work of Eswaraiyah & Bali (1976) showed significant association of 'C' line termination in cancer patients in comparison with their control group. They also found the absence of 'C' triradii are significantly higher in female cancer patients (p 0.001) but have not mentioned the type of cancer by which the patients were suffering.

Conclusion :

From the current study it can be concluded that dermatoglyphics does have a place in diagnostic screening of cancer cervix as has been amply demonstrated by the observations and also the close correlation found in the dermatoglyphic patterns reported for other cancers by other workers and those reported in this work. The dermatoglyphic patterns observed in the present study are quite significant, It could be utilised in early detection of disease process and advising disease prone individuals for a regular and frequent checkup, and taking of proper precautions. More work in this area will certainly shed more light on this subject.

Table 1 – Finger print pattern in 1st finger

Pattern	Right		Left	
	Case	Control	Case	Control
Ulnar loop	51	57	47	50
Radial loop	-	-	-	-
Whorl	43	43	42	44
Arch	6	-	11	6
	$\chi^2=6.333; p < 0.05$ (significant)		$\chi^2=1.609; p > 0.05$ (not significant)	

Table 2 – Interdigital area 2 (Both hands)

Pattern	Patient	Percentage	Control	Percentage
Absent	191	95.5	200	100
D	5	2.5	-	-
D'	-	-	-	-
L	4	2.0	-	-
1	-	-	-	-
LP	0	0	0	0
	$\chi^2 = 9.202$ $p < 0.05$ (significant)			

Table 3 – Main line termination, line 'C'

Termination	Right hand			Left hand		
	Pa-tient	Con-trol		Pa-tient	Con-trol	
Area num-ber						

11	-	-	6	6.0	-	-	-	-
9	57	57.0	59	59.0	33	33.0	41	41.0
7	16	16.0	23	23.0	30	30.0	26	26.0
5'	18	18.0	5	5.0	14	14.0	16	16.0
5	1	1.0	-	-	11	11.0	5	5.0
X	-	-	-	-	1	1.0	5	5.0
x	2	2.0	2	2.0	1	1.0	4	4.0
C-absent	6	6.0	5	5.0	10	10.0	3	3.0
	$\chi^2 = 16.37; p < 0.05$ (significant)				$\chi^2 = 11.76; p > 0.05$ (not significant)			

Table 4 – Main line termination of line 'C' (Both hands)

	Case	%	Control	%
C-Radial	90	45.0	106	53.0
C-Ulnar	90	45.0	75	37.5
C-Proximal	4	2.0	11	5.5
C-Absent	16	8.0	8	4.0
	$\chi^2=9.00;$ $p < 0.05$ Sig.			

Figure 1:

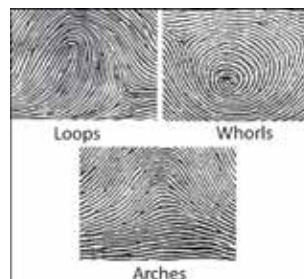


Figure 2 :



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