

CLINICAL AND HISTOPATHOLOGICAL STUDY OF CUTANEOUS TUBERCULOSISAshok S. Hogade¹, Dayanand Raikar², Nagendra Mantale³, Shrinivas Raikar⁴**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: Extrapulmonary tuberculosis constitutes about 10% of all cases of tuberculosis, and cutaneous tuberculosis makes up only a small proportion of these cases. Despite prevention programs, tuberculosis is still progressing endemically in developing countries. Commonest clinical variant of cutaneous tuberculosis in our study was tuberculous verrucosa cutis (TBVC) seen in 46.66% patients followed by Lupus vulgaris seen in 33.33% patients followed by scrofuloderma (13.33%), papulonecrotic tuberculide (6.66%). The commonest site of involvement was upper limbs seen in 46.66% patients followed by lower limb seen in 20% patients, face, neck, inguinal region, axilla, chest in 6.66% and generalized papillary eruptions in 6.66% patients. Maximum percentage of patients (53.3%) had duration of cutaneous tuberculosis between 1-3 years followed by 33.33% between 1-6 months, 6.66% had duration of cutaneous tuberculosis between 7-12 months, and rest 6.66% had duration between 4-6 years. The commonest histopathological feature in our study was tuberculoid granuloma with epithelioid and Langhans giant cells seen in 70% patients, hyperkeratosis was seen in 13.33% patients and AFB bacilli were seen in 6.66% patients.

KEYWORDS: Chancre, cutaneous, gumma, lupus vulgaris, scrofuloderma, tuberculids, tuberculosis.

INTRODUCTION: Cutaneous tuberculosis is a form of extra pulmonary tuberculosis with varied clinical presentation determined by the route of infection as well as status of cellular immunity of the host. Most of the cases of cutaneous tuberculosis can be diagnosed clinically but some cases really pose diagnostic challenges. Histopathological features are not pathognomonic but play a corroborative role in diagnosis.¹

Diagnosis of cutaneous tuberculosis (CTB) is complicated and requires a full work-up, including a detailed history and physical examination, careful consideration of clinical presentation, skin biopsy with histological analysis, and special staining methods for identification of acid-fast bacilli (AFB) and the use of other diagnostic tests, such as chest X-ray and sputum culture.²⁻⁴

This study was conducted to know the different forms of cutaneous tuberculosis and their histopathological correlation, their incidence, association with other diseases, association with other foci of tuberculosis in patients attending outpatient department of along with usefulness of common diagnostic investigations and response to commonly used drugs.

MATERIALS AND METHODS: We selected 30 patients who were clinically suspected to have cutaneous tuberculosis. To rule out tuberculosis in other organs, chest X-ray and sputum-smear examination for AFB on three consecutive days were performed for all patients. Skin biopsy was performed in all cases and examined after staining with hematoxylin and eosin. Skin biopsy, Mantoux test, chest X-ray, haemogram, and serum biochemistry were performed on these patients.

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Other tests including fine needle aspiration cytology, lymph node biopsy, and radiological imaging were conducted when clinically indicated.

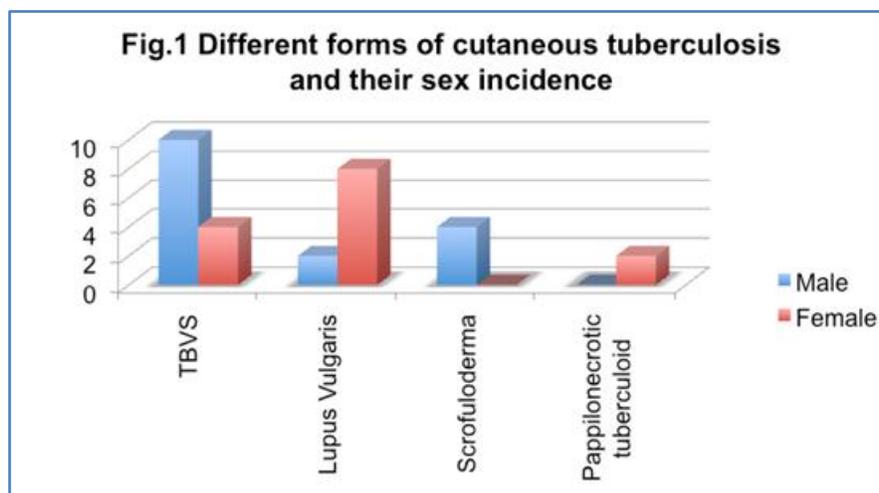
RESULTS: In our study, maximum (40%) patients were between 20-29years, 22.66% patients were between 10-19 years, 13.33% patients were between 0-9 years, and 40-49 years each and 6.66% patients were 60 years and above. Males outnumbered females and male to female ratio was 1.14: 1. [Table 1]. Commonest clinical variant of cutaneous tuberculosis in our study was tuberculous verrucosa cutis (TBVC) [Figure 1 and 3] seen in 46.66% patients followed by Lupus vulgaris [Figure 3] seen in 33.33% patients followed by scrofuloderma (13.33%), papulonecrotic tuberculide (6.66%) [Figure 3].

The commonest site of involvement was upper limbs seen in 46.66% patients followed by lower limb seen in 20% patients, face, neck, inguinal region, axilla, chest in 6.66% and generalized papillary eruptions in 6.66% patients [Table 4]. Maximum percentage of patients (53.3%) had duration of cutaneous tuberculosis between 1-3 years followed by 33.33% between 1-6 months, 6.66% had duration of cutaneous tuberculosis between 7-12 months, and rest 6.66% had duration between 4-6 years [Table 2].

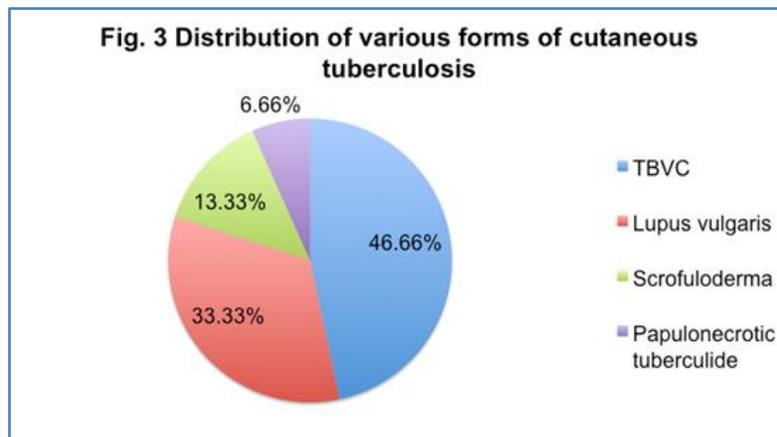
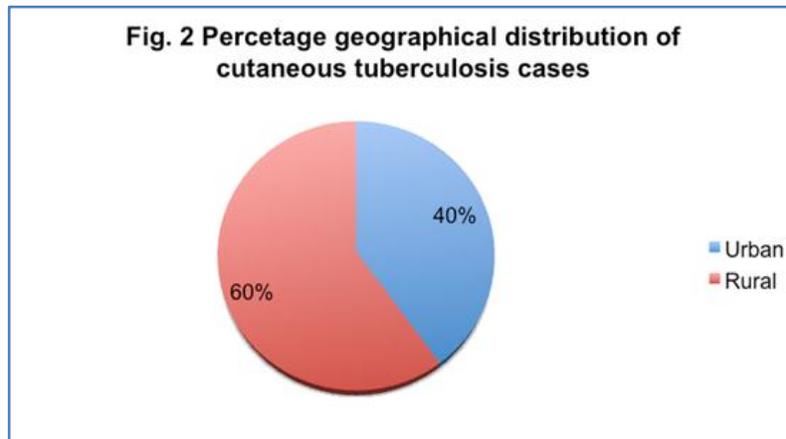
The commonest histopathological feature in our study was tuberculoid granuloma with epithelioid and Langhans giant cells seen in 70% patients, hyperkeratosis was seen in 13.33% patients and AFB bacilli were seen in 6.66% patients [Table 3].

Sl. No.	Age-group (years)	Male	Female	Total	Percentage
1	0-9	2	2	4	13.33%
2	10-19	6	2	8	26.66%
3	20-29	4	8	12	40%
4	30-39	0	0	0	0%
5	40-49	2	2	4	13.3%
6	50-59	0	0	0	0%
7	60 and above	2	0	2	6.66%
Total		16	14	30	100%

Table 1: Age and sex wise incidence of cutaneous tuberculosis



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Sl. No.	Type of cutaneous TB	1-6 months	7-12 months	1-3 years	4-6 years	Total
1	TBVC	4	2	6	2	14
2	Lupus vulgaris	4	-	6	-	10
3	Scrofuloderma	2	-	2	-	4
4	Papulonecrotic tuberculide	-	-	2	-	2
Total		10	2	16	2	30
Percentage		33.33%	6.66%	53.33%	6.66%	100%

Table 2: Duration wise distribution of cutaneous tuberculosis

Sl. No.	Features	TBVC	LV	Scro	PNT	Total	Percentage
1	Inflammatory cells	6	3	1	-	10	33.33%
2	Epitheloid cells	11	3	5	2	21	70%
3	Giant cells	9	4	4	4	21	70%
4	Hyperkeratosis	1	2	-	1	4	13.33%
5	Tuberculoid granuloma	10	5	4	2	21	70%
6	AFB	1	-	1	-	2	6.66%

Table 3: Histopathological results

Area of involvement	TBVC	LV	Scro	PNT	Total	Percentage
Upper limbs	12	2			14	46.66%
Lower limbs	2	4			6	20%
Chest		2			2	6.66%
Inguinal area			2		2	6.66%
Face		2			2	6.66%
Neck and axilla			2		2	6.66%
Generalized papillar eruptions				2	2	6.66%

Table 4: Percentage of distribution of lesions of cutaneous tuberculosis on body

DISCUSSION: To conclude, although the incidence of CTB is rare, it should be considered in patients presenting with atypical skin lesions suggestive of underlying infectious etiology.⁵ Cutaneous tuberculosis is an important health problem in this part of the country especially in lower socioeconomic group. Parents should be encouraged for routine BCG vaccination as well as proper nutrition of their children.

The laboratory diagnosis of cutaneous tuberculosis is difficult.⁶ Histopathological findings are characteristic but not pathognomonic and are shared by other granulomatous diseases including leprosy, sarcoidosis, leishmaniasis, and subcutaneous fungal infections.

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