

ORIGINAL ARTICLE

Unveiling Histoid Leprosy: A Comprehensive Case Series Analysis**Dr. Munamala Nivitha¹, Dr. Lekkala Sreedevi², Dr.A.Vijayakumari³, Dr.V.Kishore Kumar⁴,
Dr.C.Neelima⁵**

1. Junior Resident, Department of DVL, Government Medical College and General Hospital, Anantapur.
2. Associate Professor, Department of DVL, Government Medical College and General Hospital, Anantapur.
3. Assistant Professor, Department of DVL, Government Medical College and General Hospital, Anantapur.
4. Professor & HOD, Department of DVL, Government Medical College and General Hospital, Anantapur.
5. Assistant Professor, Department of DVL, Government Medical College and General Hospital, Anantapur.

CORRESPONDING AUTHOR: Dr.V.KISHORE KUMAR**Emai id : drvkishorekumar@gmail.com****ABSTRACT :**

BACKGROUND : Histoid Hansen's is a form of lepromatous leprosy with typical clinical, bacterial morphology and abundant bacillary load. It occurs in lepromatous patients who relapse after dapsone monotherapy, irregular MDT or occasionally denovo. However, the current trend shows a predominant denovo presentation. The present study was conducted to report different clinical features, histological and bacteriological findings in Histoid Hansen's.

METHODS : A prospective case study was conducted in our tertiary care centre over a period of 18 months (January 2022 - June 2023). All clinically suspected cases of Histoid Hansens and those who gave consent were included in the study. Routine blood investigations along with slit skin smear (SSS), skin biopsy were performed to confirm the diagnosis.

RESULTS : A total of 10 histoid leprosy cases were enrolled in this study. All were males with age group ranges between 30 - 65 years. 9 out of 10 were denovo cases, 1 presented 2 years after the completion of MB-MDT. Nodules were the commonest skin lesions noted. Ulnar nerve is most commonly affected, in 90% of cases. Slit skin smear revealed abundant organisms. Histopathology was consistent with Histoid Hansen's. All patients showed clinical clearance of lesions after one year of MB-MDT.

CONCLUSION : Histoid leprosy can mimic many other skin conditions. In this study majority of cases were denovo. It is imperative to rise the vigilance in a post global elimination era, to diagnose early, treat in time to prevent transmission.

KEYWORDS : Histoid leprosy, Denovo, Dapsone monotherapy.

INTRODUCTION :

Histoid Hansen's is a rare variant of multibacillary leprosy with distinct clinical and histopathological features. It was first described by Wade in 1963 with a high bacillary load. Its incidence among leprosy patients in India is estimated to be 2.79% to 3.60% and incidence among lepromatous leprosy cases is found to be 8.7%^[1,2]. Most of the cases have been related to Dapsone resistance in the context of long-term monotherapy or at times denovo. This entity usually presents in men between the ages of 30-50 years.

The name Histoid is derived from the appearance of spindle shaped cells in the nodule, similar to in Dermatofibroma^[3]. Clinically it presents as superficially placed cutaneous, sub cutaneous, deeply fixed soft nodules or plaques which are skin coloured to dark brown and coppery coloured, smooth, shiny, succulent, discrete, multiple, pain less, soft or firm, with a globular shape, surrounded by the normal skin^[3]. Posterior and lateral aspects of the arms are the most common sites involved followed by buttocks, thighs, dorsum of the hands, lower back and over bony prominence such as elbows and knees^[4]. Cell mediated immunity is more pronounced in Histoid leprosy when compared to active cases of lepromatous leprosy^[4].

The diagnosis of Histoid Hansen is established based on characteristic clinical, bacteriological and histopathological features. Slit skin smear (SSS) reveals huge bacillary load of acid-fast bacilli that are longer than the ordinary lepra bacilli. These typical bacilli are arranged in clusters, singles or in the form of parallel bundles with in the spindle shaped histiocytes.

The histopathological characteristics are notable for the presence of spindle shaped histiocytes^[5], a subepidermal grenz zone and a large number of lepra bacilli.

Currently there is a lack of definitive guidelines for the management of Histoid leprosy. The majority of clinicians adhere to the World Health Organisation (WHO) regimen for multibacillary leprosy (MB-MDT)^[3]. Histoid leprosy was managed initially by the ROM therapy (Rifampicin 600 mg, Ofloxacin 400 mg, Minocycline 200 mg). It was later changed to MB-MDT for 2 years. SSS should be repeated after completing the one-year treatment of MB-MDT. If the SSS shows long slender bacilli with solid staining and tapering ends, MB-MDT treatment should be continued for an additional year until the SSS shows fragmented bacilli and clinical clearance of skin lesions^[4].

Aim of the study is to assess the severity and various clinical presentations in Histoid Hansen's.

MATERIALS AND METHODS :

This prospective study was conducted in a tertiary care centre over a period of 18 months. In our study we enrolled all individuals with clinically suspected cases of Histoid leprosy who sought care at the outpatient department, Government medical college and general hospital, Anantapur, Andhra Pradesh, India between January 2022 - June 2023. Patients willing to participate in the study and the

age group between 12-65years were included in the study. Informed consent was taken from all the patients. Paediatric age group, age more than 65 years, and those who are unwilling for consent were excluded from the study.

A detailed history was taken and data was recorded considering age, sex, duration of symptoms, treatment history, family history in new cases presenting with clinical features suggestive of Histoid Hansens and already diagnosed cases of leprosy with features of Histoid Hansens. A thorough cutaneous and systemic examination was done including peripheral nerve examination and findings were noted. Routine investigations (complete blood count, liver function tests, kidney function tests), Slit skin smear (SSS) and punch biopsy were done in all cases.

Diagnosis of Histoid Hansen's was based on clinical features, slit skin smear, histopathological findings were reviewed and patients were treated with MB-MDT.

RESULTS :

A total of 10 Histoid Hansen's cases were recorded in 18 months duration. Male predominance was seen in this study (Table 1). The 40–50-year-old age group accounted for the maximum number of cases in the study.

Out of these, 9 patients were presented as denovo (Figure 1), (no previous history of Hansens disease), one patient developed Histoid Hansen's 2 years after completing the Multi Bacillary-Multi Drug Therapy (MB MDT) (Figure 2). Earlobe infiltration was noted in 5 patients (Figure 3).

Most common site involved is Trunk (100%) followed by face, neck (70%), upper limbs (70%), lower limbs (70%), buttocks (40%). (Table 2).

The commonly observed lesions seen were cutaneous nodular lesions, seen in 8 patients (80%) (Table 3). Subcutaneous nodular lesions in one (10%) patient. The Plaque type was observed in one (10%) patient (Figure 3,4).

One patient developed ulcer over the lesions. (Figure 5). No mucosal lesions seen. Tingling and numbness of both upper and lower limbs without deformities were noted. 3 patients showed madarosis (30%). Among all patients, peripheral nerve thickening was noted. Peripheral nerve examination showed that Ulnar nerve was the most frequently affected nerve followed by the Lateral popliteal nerve (Table 4).

In all patients Slit Skin Smear (by Ziehl-Neelsen stain) shows abundant uniformly stained organisms with tapering ends seen singly or in the form of clusters (Figure 6).

The bacteriological index (BI) ranges between 2 - 6+(Table 5).

Table 1: AGE DISTRIBUTION

AGE	NUMBER	DISTRIBUTION
30-40 YEARS	1	10 %
40-50 YEARS	5	50 %
50-60 YEARS	3	30 %
60-65 YEARS	1	10 %

Table 2: SITES OF HISTOID LESIONS

SITE OF INVOLVEMENT	NO. OF CASES	PERCENTAGE
TRUNK	10	100%
FACE AND NECK	7	70%
UPPER LIMB	7	70%
LOWER LIMB	4	40%
BUTTOCK	4	40%

Table 3: TYPE OF PRIMARY LESIONS

TYPES OF LESIONS	NO. OF CASES	PERCENTAGE
Superficially placed cutaneous Nodules	8	80 %
Subcutaneous nodules	1	10 %
plaques	1	10 %

Table 4: NERVES INVOLVEMENT

NERVE	NO. OF CASES	PERCENTAGE
Ulnar nerve	9	90%
Lateral Popliteal nerve	4	40%
Greater Auricular nerve	3	30%

Posterior Tibial nerve	2	20%
Median Nerve	4	40%
Raial cutaneous Nerve	2	20%

TABLE :5 - BACTERIOLOGICAL INDEX

Bacteriological index	0	+1	+2	+3	+4	+5	+6
Histoid leprosy	-	-	1	-	2	2	5

FIGURE: 1

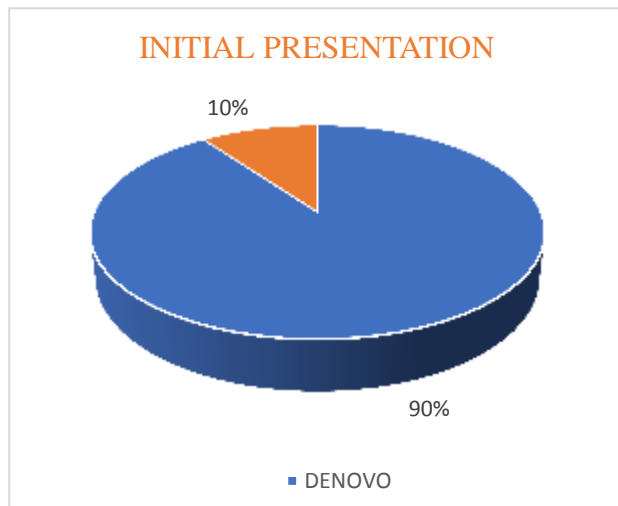


FIGURE: 2

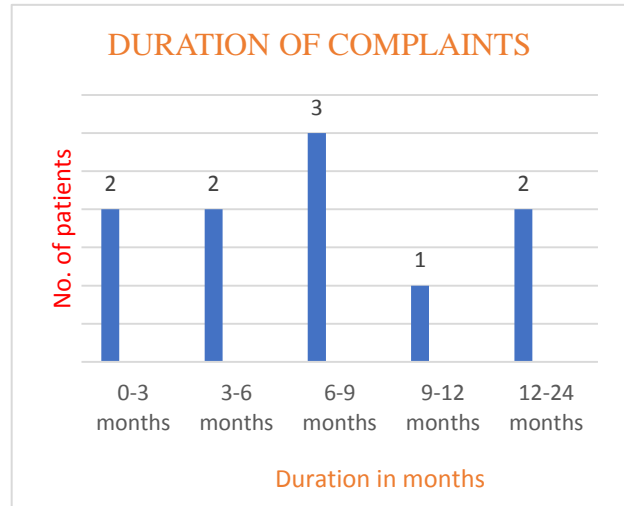


Figure 3: Clinical images showing multiple superficial nodular lesions with ear lobe infiltration



Figure 4: Plaque morphology of histoid lesions



Figure 5: Ulcerations over the histoid lesions

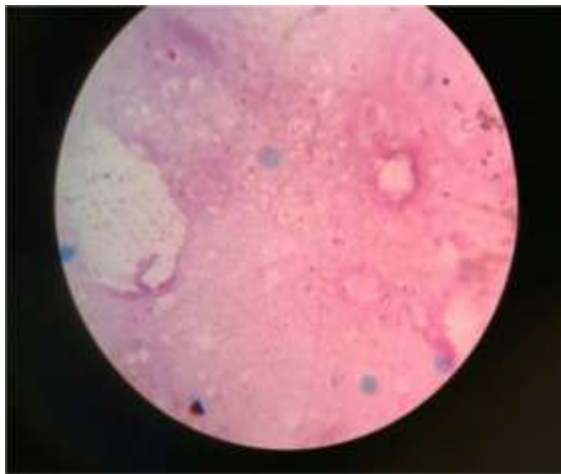


Figure 6: Slit skin smear showing abundant acid-fast bacilli in singles

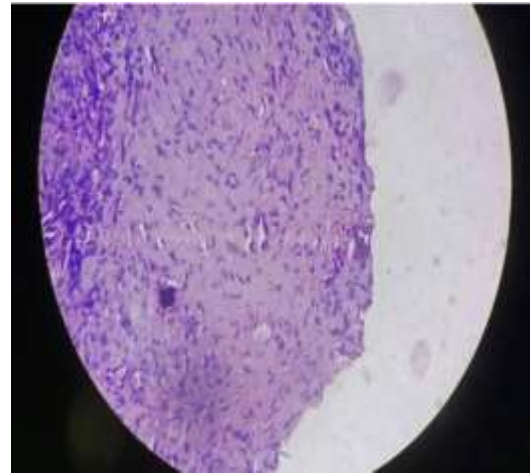


Figure 7: Histopathology showing spindle shaped cells

DISCUSSION :

Among total leprosy patients, Histoid Hansen's incidence in India varies from 2.79% to 3.60% with male predominance. A total of 10 histoid cases were recorded in 18 months duration. Male predominance (100%) was seen in this study which was similar to studies done by Kaur et al ^[6] (5.7: 1), Sehgal et al (8.2: 1) ^[6,7,8] (Table 1). The 40–50-year-old age group accounted for the maximum number of cases in this study which is consistent to the studies by Kaur et al ^[6] and Nair et al and in differ to

studies by Sehgal et al^[8] and Kalla et al^[9] where the 20–40-year-old age group was most commonly affected^[6,7,8].

Trunk is the most common site involved and is seen in 100% of our cases followed by upper limbs in 70%, is comparable to Nair and Kumar et al^[10] in which upper, lower limbs and trunk shows 100%, 60% respectively.

Nodule is the most common presenting lesion and was found in 80%, followed by plaques in 20% of the cases as compared to study by Subha et al^[9] in which nodules are 91%, papules 72%, plaques 36%. Facial involvement with earlobe infiltration is seen in 50% of our cases.

Most common nerve involved was ulnar nerve (90%), which is correspondent to the studies conducted by Subha et al^[12] (100% of cases), Nair et al^[10].

Most of our patients were previously untreated and denovo cases. Only 1(10%) out of 10 cases had taken MB-MDT earlier, which is akin to the studies reported by Sehgal et al^[8] (2005) and Kalla et al^[9] (2000).

HISTOID LEPROSY- COMPARISON WITH REPORTED CASES BY OTHERS

	Present study	Subha et al ⁹	SP Nair et al ³	Raheja et al ¹⁰
Total no. of patients	10	11	6	4
Age (years)	30-65	22-40	35-57	20-70
Gender(male:female)	All males	All males	4:2	1:1
Primary lesions	Nodules plaques	Nodules Papules Hypopigmented patches	Papules Nodules plaques	Papules Nodules plaques
Most common site	Trunk	Arms Back	Upperlimbs	Face, upperlimb
Type of presentation	Denovo-100%	Denovo-63% LL-36%	Denovo-83% Relapse-16%	Denovo-100%
Most common	Ulnar	Ulnar	Ulnar	Ulnar

nerve thickened				
SSS-BI	2-6+	4-6+	4-6+	5-6+

CONCLUSION :

The high bacilliferous, Histoid variant of Lepromatous leprosy occurs occasionally as denovo. However, the current trend shows a predominant denovo presentation. These patients form a potential reservoir of infection and cases continue to occur in post global elimination era. Therefore, it is crucial to rapidly identify newly occurring cases in order to initiate World Health Organisation (WHO) Multibacillary Multidrug Therapy (MB-MDT) treatment and achieve a positive outcome through appropriate monitoring.

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AUTHORS CONTRIBUTIONS :

All the authors have contributed equally in the study design, data analysis and manuscript preparation.

CONFLICTS OF INTEREST: Nil

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