

## Evaluation of Lesions of Hypopigmented Patches Attending the Dermatology Clinic- A 2.5 Year Retrospective Study

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### Abstract:

**Introduction:** Leprosy is a chronic infection as it still remains a major health hazard. India has a high incidence and prevalence rate of leprosy. **Aim:** The present study is aimed at evaluating the hypopigmented patches on the skin coming to the dermatology opd in tertiary care centre of Madhya Pradesh. **Material & Methods:** A total no. of 208 skin biopsies were submitted during this study period 2.5 years. Study subject included all skin biopsies submitted from Jan 2013 to June 2015 for histopathological examination were taken into consideration. **Results:** . Chronic nonspecific dermatitis was the most common histology seen in 36% cases followed by Tuberculoid leprosy 28.8%, Borderline leprosy 15.8%, Indeterminate leprosy 12.9%, Erythema nodosum reaction 3.3%, Lepromatous leprosy 2.4% and Histoid Leprosy 0.4%. **Conclusion :** This study aims at finding the histological pattern of hypopigmented patches in the skin sent for histological diagnosis.

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### I. Introduction

Leprosy is a chronic infection as it still remains a major health hazard. India has a high incidence and prevalence rate of leprosy. The disease derived its name from the Latin word lepra meaning scaly [1]. Leprosy caused by Mycobacterium leprae is a chronic infectious disease, which can affect all ages and both sexes. In the last century leprosy has been a major public health problem in India. National leprosy elimination programme (NLEP) was initiated in 1993 to decrease prevalence rate of leprosy below 1 case/10,000 population [2]. Leprosy has been officially eliminated from India since Dec 2005. But there are districts and blocks which are reporting high prevalence indicating an ongoing transmission [3]. The present study is aimed at evaluating the hypopigmented patches on the skin coming to the dermatology opd in a tertiary care center in Gwalior MP.

### II. Material And Methods

It is a retrospective histological study of hypopigmented patches in patient coming to dermatology opd in G.R. Medical college Gwalior. Study subject included all skin biopsies submitted from Jan 2013 to June 2015 for histopathological examination were taken into consideration. Patients age and histological diagnosis along with the types of leprosy were summarized.

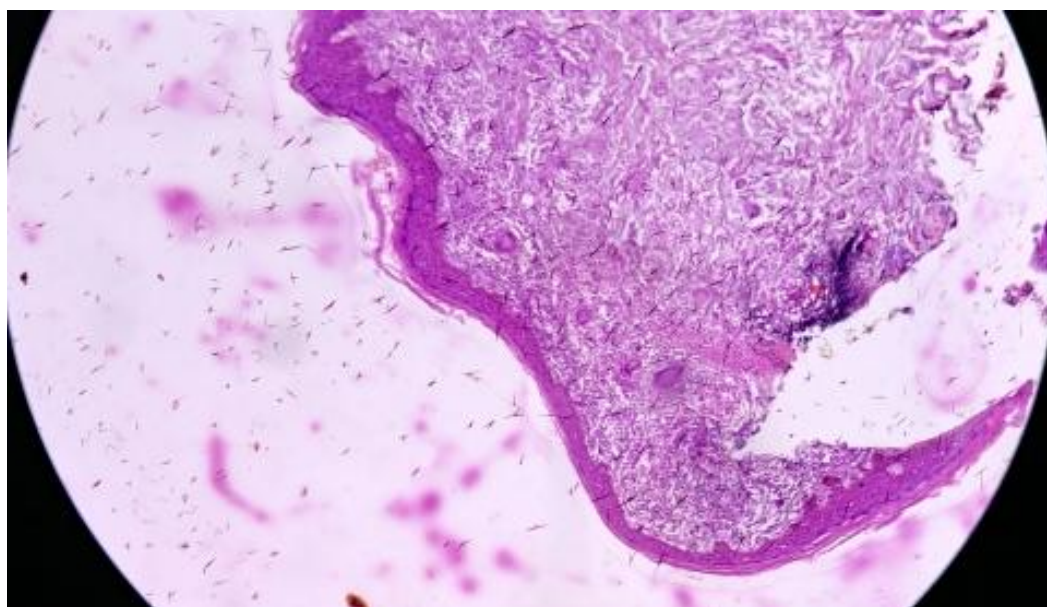
**Exclusion criteria:** Patients with skin diseases other than hypopigmented patches were not included in the study.

**Inclusion criteria:** Patients who had decreased sensation with no obvious skin lesions were not included in the study.

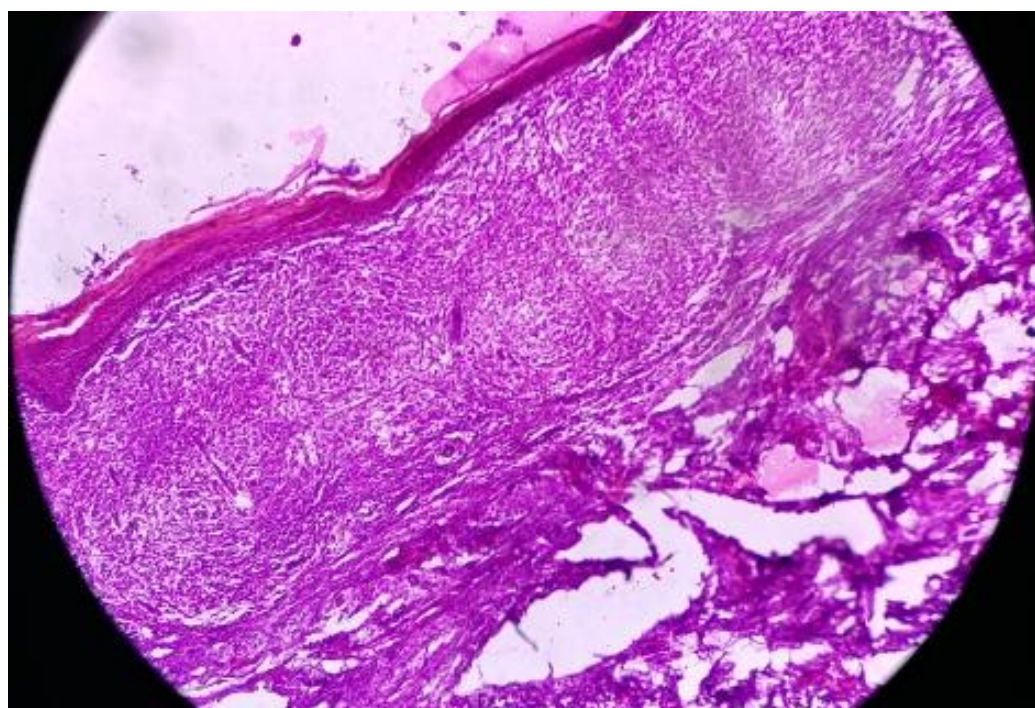
### III. Results

A total no. of 208 skin biopsies were submitted during this study period 2.5 years with M:F ratio 2.4:1. Chronic nonspecific dermatitis was the most common histology seen in 36% cases followed by Tuberculoid leprosy 28.8%, Borderline leprosy 15.8%, Indeterminate leprosy 12.9%, Erythema nodosum reaction 3.3%, Lepromatous leprosy 2.4% and Histoid Leprosy 0.4%.

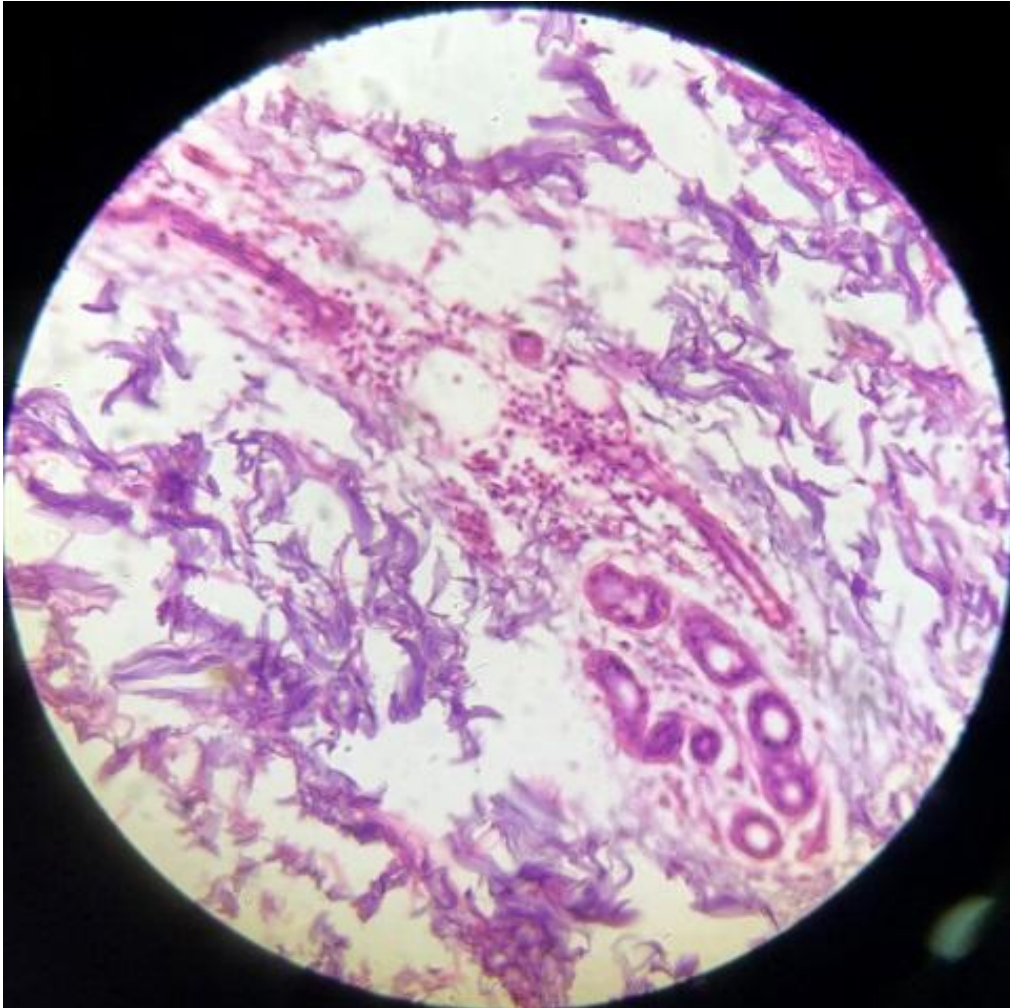
AGE [years]	CASES	DIAGNOSIS	CASES
11-20 years	25	Chronic nonspecific dermatitis	36%
21-30 years	47	Tuberculoid leprosy	28.8%
31-40 years	40	Borderline leprosy	15.8%
41-50 years	37	Indeterminate leprosy	12.9%
51-60 years	39	Lepromatous leprosy	2.4%
61-70 years	15	Erythema nodosum reaction	3.3%
>70 years	05	Histoid leprosy	0.4%



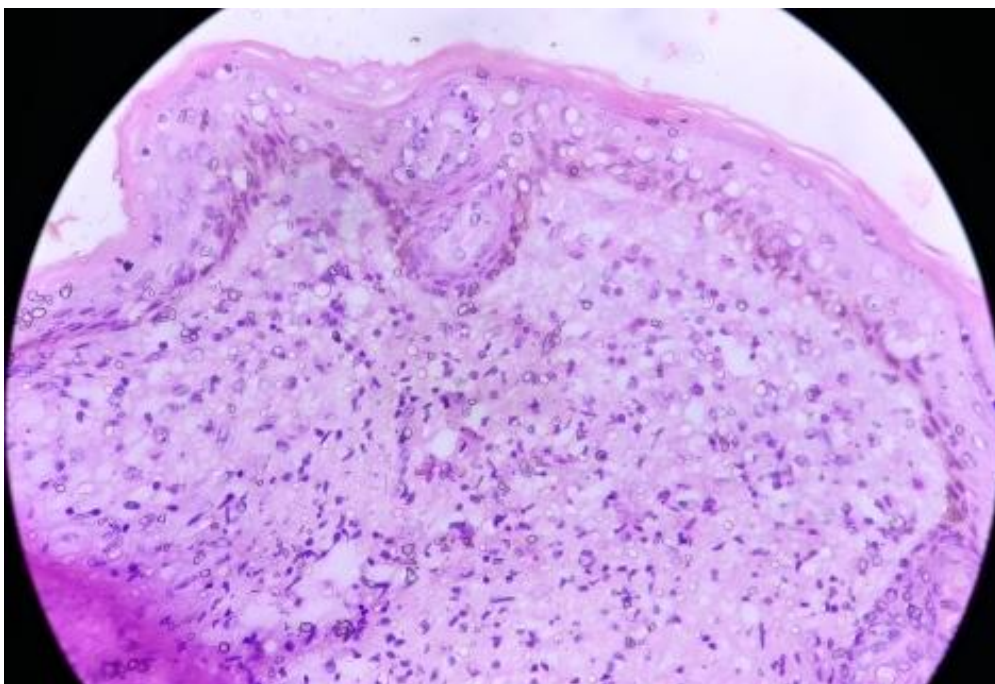
Tuberculoid Leprosy showing giant cells



Tuberculoid Leprosy showing multiple granuloma in the dermis



Early Hansen's disease showing lymphocytic infiltration around the sweat glands



Borderline Leprosy showing ill defined collection of lymphocytes

#### **IV. Discussion**

The WHO launched a 5-year “Global leprosy strategy 2016– 2020’ in April 2016 which was titled 'accelerating towards a leprosy free world'. The strategy for years 2016–2020 is given below:

1. To strengthen government ownership, coordination, and partnership
2. To stop leprosy and its complications
3. To stop discrimination and promote inclusion[4].

Our study was a retrospective ,after analyzing the data of 208 hypopigmented patches in patients who attended dermatology clinic in a period between jan 2013 to june 2015. The maximum number of cases (47 patients) belong to 21-30 years (22.5%). The male: female ratio is 2.4:1. In a study conducted by Jindal et al the maximum number of cases belonged to 21-30 years of age group. A male preponderance was also observed in same study[5].The higher male to female ratio (2.4:1) in our series could be due to increased opportunities for contact in males, and lack of social perceptive towards female health care.

The male preponderance for leprosy noted in our study was also been shown in other studies like Manandhar et al.[12] and Vargas-Ocampo.[13] This might be attributed to increased chances of exposure due to increased job-related mobility.In most of these cases (36%), the findings on histopathological examination were chronic nonspecific dermatitis.

Among the types of leprosy our study showed tuberculoidleprosy as the most common, witha 28.8% followed by borderline leprosywith 15.8%, lepromatous 2.4%. In a study conducted in 2016 by RekamAnusga et al tuberculoid was the most common type of leprosy (28.6%), followed by Borderline leprosy in 12.2%, Lepromatous leprosy in 10.2%[6]. In a study conducted in 2012 by Shivaswamy K N et al tuberculoid leprosy was the most common type of leprosy with 38.4% followed by Borderline leprosy in 13.1%, Lepromatous leprosy in 12.6% [7].

In our study, histoid leprosy with 0.4%. In a study conducted by Kaur et al in histoid cases were 1.8%[8].

After chronic nonspecific dermatitis majority of cases had tuberculoid leprosy, which is similar to findings by Kumar et al, Jain et al and Rao[9][10][11].

In our study, the most common histological subtype was tuberculoid leprosy followed by borderline leprosy. Tuberculoid leprosy has been reported to be the most common histological type of leprosy in other studies as well.[14],[15],[16]

#### **V. Limitations**

This was a retrospective data analysis based on departmental records, hence bias in reporting cannot be totally ruled out. We could include only the cases presenting to our tertiary care center. It could be safely assumed that more complicated cases were being recorded. Community-based surveys covering the district population could help clarify this issue.

#### **VI. Conclusion**

This study aims at finding the histological pattern of hypopigmented patches in the skin sent for histological diagnosis. Chronic nonspecific dermatitis is the most common lesion and histoid leprosy is the least common lesion. This study helps in assessing the percentage of patients who have hansens disease presenting as hypopigmented patches and we also could conclude that tuberculoid Hansen was the most common type of leprosy and histoid leprosy was least common.

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