



## Hansens Disease – A Case Report

Authors

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### Abstract

*Hansens disease or leprosy is a chronic granulomatous disease involving skin, peripheral nerves, nasal mucosal and capable of effecting any organ. The disease reflects immune status of host, chemotherapy and host resistance. Leprosy is a disease known from vedic times in India and biblical times in middle east<sup>1</sup>. Leprosy patients was considered unclean and social outcast. Bacillus was discovered by GERHARD HENRIK ARMAUER HANSEN in 1873. It was the first bacterium to be identified as causing disease in humans. Numerous leprosaria (leper hospitals) sprang up in middle ages. The first recorded leprosarium was in Harbledown. Those suffering from leprosy were considered more holy than ordinary persons. Tuberculoid leprosy is characterized by a small number of skin lesions, few bacilli in lesions, and development and recruitment of T lymphocytes. At the other extreme, lepromatous leprosy is characterized by a larger number of skin lesions, clinically apparent infiltration of peripheral nerves and skin lesions by a large number of bacilli, and the presence of fewer T lymphocytes in lesions whose effector mechanisms are unable to control the infection<sup>2,3</sup>.*

### Case History

44yr old male patient with presenting complaints of asymptomatic nodules, infiltrated plaques and annular plaques seen all over the body since 2 yrs. Associated history of epistaxis and pedal oedema present. Past history-no history of any similar illness.

Personal history- chronic alcoholic, construction worker works with people from northern states of INDIA.

Marital history-married. 2 Children. No history of any similar illness in the family.

### Examination Findings

Multiple skin coloured nodules, infiltrated plaques and annular plaques seen in a generalised distribution, sensation was intact.

Bilateral glove and stocking anaesthesia present.

Bilateral ulnar nerve and common peroneal nerve thickened.

Bilateral pitting oedema present.

Ulceration present over R big toe.

### Clinical Diagnosis

Lepromatous Leprosy subpolar.

Histoid Leprosy.

**Investigations**

Blood routine:

Haemoglobin-14.3g%.

Total count (TC) -7800

Differential count(DC) -N68,L24,E2,M6.

ESR-45mm/hr.

3

Platelet count-3.6 lakhs/mm

Total Bilirubin-0.40mg% (0.2-1)

Direct Bilirubin-0.10mg% (0-0.3)

Indirect Bilirubin-0.30mg% (&lt;1.1)

SGOT-29IU/L (15-37)

SGPT-35IU/L (30-65)

Alkaline phosphatase-45IU/L (50-136)

Total protein-9.1g% (6.4-8.2)

Albumin-4.2g% (3.4-5)

Globulin-4.9g% (1.8-3.5)

A/G (Albumin/Globulin) ratio-0.9 (1.1-2.2)

Urea-35mg% (20-40); creatinine-1mg% (0.6-1.3)

**Slit Skin Smear for Lepra Bacilli**

All skin smears are positive for

1) Acid fast bacilli (Ziehl-Neelsen staining with 5% H<sub>2</sub>SO<sub>4</sub>).

2) Globi seen.

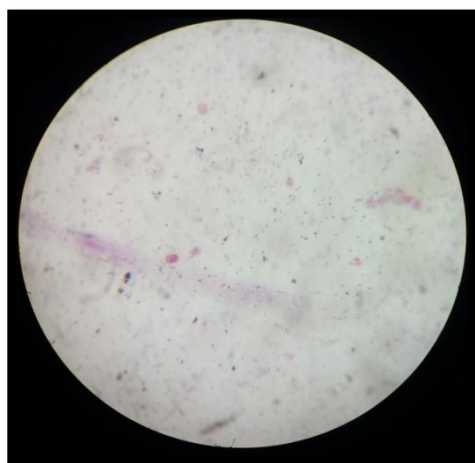
Bacteriological Index

1.Nodule :5+

2.Infiltrated plaque :3+

3.Normal skin :3+

4.Ear lobe :4+

 $15/4=3.75$ **Slit Skin Smear for Lepra Bacilli (100 x)**

Morphological index-Percentage of uniformly stained bacilli out of the total number of bacilli counted-60%.

Incisional skin biopsy-A, B

A) Nodule from chest.

B) Infiltrated plaque on right arm.

**Microscopy**

(A) & (B) Sections from skin shows atrophic epidermis and extensive cellular infiltrate in the dermis seen separated from the flattened epidermis by a narrow grenz zone of collagen. Extensive cellular infiltrate composed of foamy macrophages few showing spindling are seen as diffuse solid sheets both in the superficial dermis and also in the perineural and periappendageal region. acid fast stain show heavy loads of lepra bacilli and solid packs (like cigars).

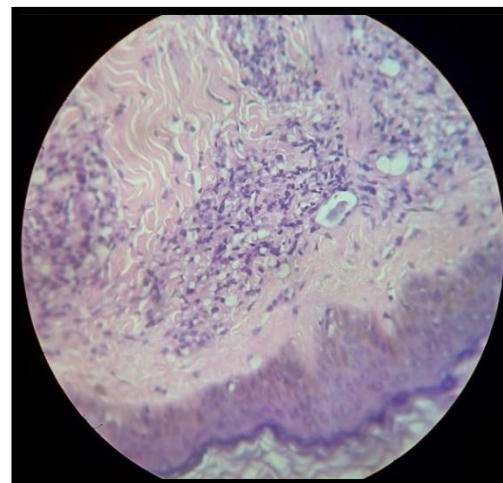
Bacterial index- 6.

**Diagnosis-Incisional Skin Biopsy**

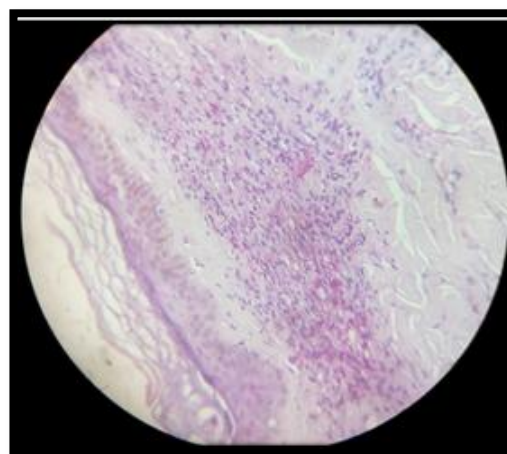
(A) &amp; (B) Lepromatous leprosy

Bacterial index- 6

H &amp; E Stain (40 X)



Fite Faraco Stain (40X)



**Treatment**

MDT(multi drug therapy) started.

Tab.Augmentin 625mg 1-1-1 for 7 days.

Soframycin cream for local application

**References**

1. Hastings R, ed. Leprosy. 2nd ed. Edinburgh: Churchill Livingstone;1994.
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3. Yamamura M, Uyemura K, Deans RJ, et al. Defining protective responses to pathogens: cytokine profiles in leprosy lesions. Science. 1991;254:277-279.