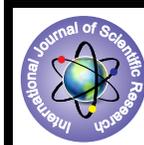


## HIDDEN METASTASIS OF SQUAMOUS CELL CARCINOMA IN A CASE OF LEPROSY.



### Medical Science

**KEYWORDS :** metastatic squamous cell carcinoma, leprosy, non healing ulcer.

<b>Dr. Trupti Shetty</b>	Assistant professor, Department of pathology, MGM Medical college, Kamothe, Navi Mumbai
<b>Dr. Manisha Tambekar</b>	Associate professor, Department of pathology, MGM Medical college, Kamothe, Navi Mumbai
<b>Dr. Mohsin Kamaal</b>	Post graduate student, Department of pathology, MGM Medical college, Kamothe, Navi Mumbai
<b>Dr. D.B.Borkar</b>	Professor, Department of pathology, MGM Medical college, Kamothe, Navi Mumbai
<b>Dr. Reeta Dhar</b>	Professor & HOD, Department of pathology, MGM Medical college, Kamothe, Navi Mumbai

### ABSTRACT

*Leprosy is a contagious and chronic systemic granulomatous disease of skin and peripheral nerves caused by Mycobacterium leprae (Hansen's bacillus). Till date more than 100 cases of squamous cell carcinoma in neuropathic trophic ulcers of leprosy patient have been reported but cutaneous metastasis of the carcinoma is an unusual finding. We report a case of 65 year old male with a history of lepromatous leprosy of 55 years duration presenting with left axillary swelling revealing undiagnosed metastatic squamous cell carcinoma on FNA and histopathology arising from a non healing ulcer of left upper extremity.*

### Introduction

Leprosy (also known as Hansen's disease) is a chronic infectious disease caused by bacillus *Mycobacterium leprae*. It is transmitted from person to person and has long incubation period (between two to six years). The disease presents as polar clinical forms (multibacillary lepromatous leprosy and paucibacillary tuberculoid leprosy) as well as other intermediate forms with hybrid characteristics capable of exclusively damaging the peripheral nervous system and secondarily involving the skin and other tissues<sup>1,2</sup>. According to WHO, leprosy is still a public health problem in nations such as Angola, Brazil, Central African Republic, Democratic Republic of Congo, India, Madagascar, Mozambique, Nepal and the United Republic of Tanzania<sup>3</sup>. Non healing trophic ulcers in a leprosy is a common phenomenon but malignant transformations of the same takes over a long period of time with average being 32.5 years but ranges between 25 and 40 years. The mean duration of neuropathic ulceration until diagnosis of SCC was 24.5 years<sup>4,5</sup>.

### Case report

A 65 year old male with a history of lepromatous leprosy, diagnosed at the age of 10 was referred to our OPD services for FNAC procedure with a chief complain of left axillary swelling present since one month. His past medical history revealed that he was a diabetic and hypertensive. There was a history of leprosy in the family.

On general examination: patient had leonine face, sad dle nose deformity and bilateral madarosis with poor dental hygiene and multiple caries. He had a surgi cal history of left wrist amputation done outside as a line of treatment for non healing ulcer 6 months back. He had amputations of the fingers and toes of both the feet (Figure 1). Peripheral neuropathy was confirmed. Local examination of the axillary swelling showed a large painless swelling measuring 8x8 cms extending from anterior axillary fold to posterior axillary fold (Figure 2). Overlying skin was partly ulcerated, with irregular margins firm to hard in consistency and non mobile.

He had similar swellings over the right and left upper extremities present mainly on the forearm clinically appearing as lepromas ranging in size from 2 to 3 cms in diameter (Figure 3).USG of left axillary re-

gion showed malignant growth, but not arising from axillary lymph node. Few reactive nodes measuring 0.5 to 1 cm in diameter was present. USG of forearm swellings were suggestive of lipomatosis.

Fine needle aspiration from left axillary swelling revealed cytomorphological features suggestive of squamous cell carcinoma (Figure 4). There were no lymphoid cells in the background in the FNA smears. But to our surprise fine needle aspiration of the swellings present on both the upper extremities showed similar cytomorphological features as that of axillary swelling which made this case unusual and interesting.

Excision biopsy of the axillary swelling along with lymph nodes done and on microscopy showed features of Squamous cell carcinoma with metastasis to lymphnodes (Figure 5).

Other investigations: Chest X- ray showed cardiomegaly. Fundoscopy showed grade 1 hypertensive changes in the fundus. USG Abdomen & Pelvis – Umremarkable.



**Figure 1: showing autoamputation of toe.**



Figure 2: showing left axillary swelling.



Figure 3: showing multiple nodules on both upper extremities and left wrist amputation.

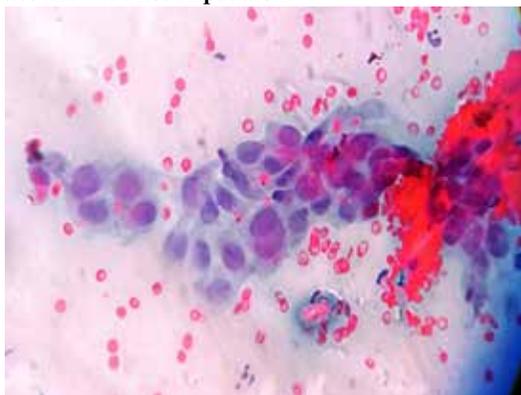


Figure 4: showing cytomorphological features of squamous cell carcinoma (PAP x 40).

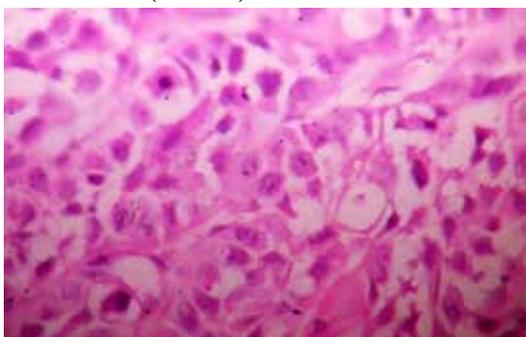


Figure 5: showing features of Squamous cell carcinoma (H&E x 40).

**Discussion**

Leprosy (also known as Hansen’s disease) is a chronic infectious disease with particular epidemiological and clinical characteristics. Leprosy is an ancient notifiable disease known as its disfiguring capability and the high rate of non-compliance to treatment. The disease is endemic in many tropical and subtropical countries but is declining in prevalence as a result of multidrug therapy. The low adhesion is responsible for the remaining potential sources of infection, irreversible complications, incomplete cure and, additionally, may lead to resistance to multiple drugs<sup>6,7,8</sup>.

Around one-third of people with leprosy present the first clinical manifestations during childhood. The infection caused by *Mycobacterium leprae* carries a long incubation period, from months to 20 years, averaging three to five years. Its preference for cooler anatomical regions means that vital organs are usually preserved, but makes leprosy a disease that slowly destroys the distal areas of fingers and toes and causes nasal and facial deformities that lead to social marginalization<sup>2</sup>. Our patient had typical presentation of lepromatous leprosy, which represented more severe spectrum of disease with multi-bacillary involvement and poor host immunity.

Malignant neoplasm arising in chronic, non-healing wounds has been known since ages and it was named Marjolin’s ulcer about one hundred years ago. This scar malignancy arises in burned, constantly injured or chronically inflamed skin<sup>4,8</sup>. Squamous cell carcinoma (SCC) is the most commonly identified histological type followed by basal cell carcinoma. Lower extremities are the most commonly affected site. Next is the head region (with face, scalp and neck), followed by the upper extremities and the trunk<sup>9</sup>.

Changes such as the appearance of flat, non-healing ulcers enlarging in circumference with elevated and indurated borders, foul-smelling, painful with exudate and bloody drainage suggest a malignant transformation<sup>9</sup>.

Most literature reported shows an association of leprosy and skin cancer. The presence of tumor cells prevent the healing of ulcers. It has been suggested that cellular mutations are responsible for neoplastic changes, and infection might serve as a co-carcinogen<sup>4</sup>. It has also been suggested that patients with inherent immune deficiency are at higher risk for developing malignant ulcers<sup>4</sup>. Wilson et al in their study of 18 cases of plantar squamous cell carcinoma showed that precursor lesions were injury and leprosy<sup>10</sup>.

Lepromas presented as multiple nodules are prone for ulceration and necrosis<sup>2</sup>. Few studies state that high degree of atrophy and elastic degeneration of dermis offers a favourable field for the action of carcinogenic agents. Leprosy bacilli are rarely found in cancer cells. When apparent they have the typical shapes (isolated or form globi), with a granular aspect and bacillary dust. Suppuration due to necrosis or secondary infection leads to disappearance of bacilli. In view of the high frequency of malignant tumors of the skin among persons with leprosy and the fact that cancer lesions are in some respects clinically similar to lepromas or to lepromatous infiltrations, it is possible that in many cases the diagnosis of cancer may be overlooked<sup>11</sup>.

High degree of metastatic squamous cell carcinoma in this patient was seen possibly due to immunocompromised state, poor host immunity which couldn’t be overlooked<sup>4</sup>. We report this case for its atypical presentation with cutaneous metastasis.

**Conclusion**

Malignant change in non healing ulcer in leprosy may be found more often if patients are examined with care hence vigilant screening should be done for early diagnosis. Early specialist re-

ferral and increased awareness is recommended to prevent the growth of aggressive cancers in chronic neuropathic ulcers.

Acknowledgement to the Department of Surgery, MGM Medical College and hospital, Kamothe, Navi Mumbai.

## REFERENCE

1. Chang MM, Choi PCL. Lepromatous leprosy : a case simulating verrucous | carcinoma . Hong Kong J. Dermatol. Venereol. 2012; 20: 77-81. |
2. Kustner EC, Cruz MP, Dansis CP, Iglesias HV, Campillo M, Lopez. Lepromatous | leprosy: A review and case report. J. Med Oral Patol Oral Cir Buccal 2006; 11:E474-9. |
3. Talhari C, Machado PRL, Ferreira LC & Talhari S. | Shifting of the clinical spectrum of leprosy in an HIV-positive patient: a manifestation of immune re-constitution inflammatory syndrome? Lepr Rev. 2007;78: 151–154. |
4. Sandhya V, Anandan S, Nikilesh K, Narayan CD. Squamous cell carcinoma masquerading as a trophic ulcer in a patient with hansen's disease. The International Journal of Lower Extremity Wounds. 9(4) 163-5. |
5. Schoeman BJ. Squamous cell carcinoma in neuropathic plantar ulcers in leprosy: another example of Marjolin's ulcer. S Afr Med J. 1996; 86(8):966-9. |
6. Sutjita M, Jenouri G, Holden MD, Daniels JC. Lepromatous Leprosy in | a Patient with B-Cell Lymphoma and Tubulointerstitial Nephritis. Hospital Physician January 1999:51-54 |
7. David E. Elder, Rosalie Elenitsas, Bennett L. Johnson, George F. Murphy. Levers | Histopathology of the skin. Ch 21. Bacterial diseases. Williams and Wilkins. 2005; 9th | ed. 569. |
8. Regio Jose Santiago Girao, Nara Livia Rezende Soares, Juliana Viana Pinheiro, Giuliano da Paz Oliveira, Sionara Melo Figueiredo de Carvalho, Luiz Carlos de Abreu, Vitor E Valenti and Fernando Luiz Affonso Fonseca. Leprosy treatment dropout: a systematic review. International Archives of Medicine 2013, 6:34: 1-9. |
9. Urszula Ochenduszkiewicz, Rafal Matkowski, Bartlomiej Szynglarewicz, Jan Kornafel. Marjolin's ulcer: malignant neoplasm arising in scars. Rep Pract Oncol Radiother. 2006;11 (3):135-138. |
10. Wilson onuigbo and Gabriel Ebagu Njeze. Plantar squamous cell carcinoma in a | developing community. Online International Intersciplinary Journal. 2014;4: 12-16. |
11. Michalany J. Malignant tumors of the skin among leprosy patient. Int J Lepr Other Mycobact Dis. 1966; 34(3): 274-86. |