



AN UNUSUAL PRESENTATION OF LEPROSY: PURE NEURITIC LEPROSY WITH ABDOMINAL LEPROMATOUS LEPROSY

Internal Medicine

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ABSTRACT

In this case report we present a case of a 40-year-old man came with a clinical presentation of tingling, burning sensations and weakness in bilateral lower limb and then bilateral upper limb since 10-12 months. With no specific investigative findings, a diagnosis of severe motor and sensory demyelinating polyneuropathy was made. But later developed hand and foot deformities and then diagnosed as pure neuritic leprosy with lepromatous abdominal lymphadenopathy.

KEYWORDS

Polyneuropathy, Lymphadenopathy, Deformities, Leprosy

A 40-year-old man, from the rural area of South-western Maharashtra, came to our tertiary care hospital with a clinical presentation of tingling and burning sensation in both lower limbs since 1 year, Weakness in both lower limbs since 8 months, tingling and burning sensation in both upper limbs since 6 months, weakness in both upper limbs since 5 months also decreased vision and pain in abdomen since 1 month.

There is no other history suggestive of involvement of cortical, subcortical or brainstem areas. Patient had taken treatment from local neurologist (details not available). Patients general and systemic examinations were within normal limits except for central nervous system examination, which showed

Cranial nerve examination—
Optic nerve - RE - 6/24 - 6/6 LE - 6/9 - 6/6 Vision - decreased, Other Cranial nerves - NAD
Motor function -
Tone - Upper limb - decrease Lower limb - decrease

Fundoscopy suggestive of bilateral eye grade 3 papilloedema, and nerve conduction study was suggestive of severe motor & sensory demyelinating type of polyneuropathy affecting upper and lower limbs.



So, after thorough evaluation we have made our provisional diagnosis of chronic progressive quadriparesis of LMN type (distal > proximal) without bowel bladder involvement. Most probably it is a polyneuropathy of large myelinated fibers (axonal type).

But as no improvement was seen and after few days patient developed hand and foot deformities during the course of treatment,

on further evaluation of USG and CECT(A+P) - Hepato-splenomegaly with abdominal lymphadenopathy was seen so we went for CT guided mesenteric lymph node biopsy.

Power -
Upper limb - Right - 4/4/4 - Left - 4/4/4 Lower limb -
Right - 4/4/2 - Left - 4/4/2
Sensory function - Superficial, deep lost, Cortical sensations - intact

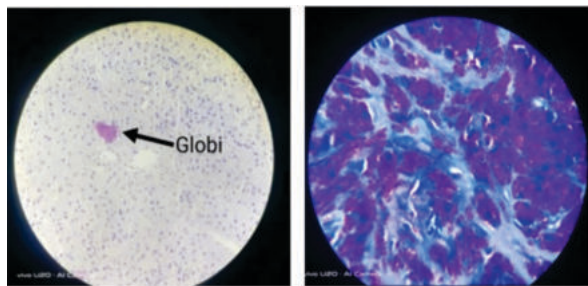
Reflexes - Superficial - Absent, Deep - Absent.

His routine investigations included hemoglobin of 11.8 gm%, platelets count was 40-50000/cumm, normal leucocyte count of 7500/mm³, his HIV, HCV & HBSAG were negative, PT/INR was normal 15 secs/1.0, Serum Bilirubin (T/D/I) 0.9/0.6/0.3, SGOT/SGPT was 22/30, Urea level was 37mg/dl and serum creatinine 1.2 mg/dl Blood glucose levels were 98 mg/dl, ESR levels were normal that is 10.0So, on this basis we have made our diagnosis of pure neuritic leprosy with lepromatous abdominal leprosy with optic nerve involvement and started patient on multi-drug therapy. After few months of therapy for leprosy patient was able to walk on his own, discharged and sent home.



A specimen was taken by needle biopsy from mesenteric lymph node and sent for histopathological examination.

On gross examination, specimen consists of single elongated piece of light brown tissue measuring 1*0.3*0.2 cms and on microscopic examination section showed sheets of foamy macrophage and globi and with 5% Ziehl-Neelson stain was positive for acid fast bacilli.



DISCUSSION

Leprosy, also known as Hansen's disease, is a chronic granulomatous infection caused by the bacterium *Mycobacterium leprae*. Though it usually affects the skin and peripheral nerves, it also affects muscles, bones, eyes, testes and other internal organs. Although the mode of transmission is uncertain and transmission routes may in fact be

multiple. But *M. leprae* is usually spread from person to person through respiratory droplets, other contact with infected soil and amoeba insect vectors.

Pure neuritic leprosy is commonly reported from India. Other terms that have been used as synonyms for pure neuritic leprosy in the literature include Neural, Neuritic, Pure neural, Primary neural, Primary neritic, Purely neural or Poly-neuritic leprosy. In this type of leprosy, there are no skin lesions. Larger nerve trunks or their branches are enlarged. There is a sensory loss in the areas of distribution of the nerves. Skin smears may be negative.

Mononeuritis is the most common presentation of pure neuritic leprosy. In pure neuritic leprosy, in general, upper limb nerves (mainly ulnar nerve) are more commonly involved as compared to lower limb (mainly lateral popliteal nerve). As there are no skin lesions as a rule in pure neuritic leprosy, most patients present to clinics with sudden appearance of numbness with/without ulcers or with deformity or muscle weakness in a limb, also patient may present with nerve pain (neuropathic pain).

Though leprosy is a rare cause of lymphadenopathy, but lymph node biopsy can surely reveal the diagnosis. In one study done in Pakistan in 2000 by Abdullah et al., lymph node biopsy done in 872 cases of lymphadenopathy. Major causes were tuberculosis, reactive hyperplasia, and lymphoma. However, 0.3% cases were diagnosed as leprosy.

Leprosy with ocular involvement may include lagophthalmos, corneal involvement, cataract, uveitis, dacryoadenitis, eyelid involvement and optic nerve involvement. Optic nerve involvement in the form of papillitis or optic atrophy is a rare complication of leprosy.

REFERENCES

1. IADVL's Textbook of Dermatology, 5/E 2022, 3058-3193.
2. Abdullah P, Mubarik A, Zahir N. The importance of lymph node biopsy in diagnosis of lymphadenopathy. J Coll Physicians Surg Pak 2000;10:298-301. Abdullah P, Mubarik A, Zahir N. The importance of lymph node biopsy in diagnosis of lymphadenopathy. J Coll Physicians Surg Pak 2000;10:298-301.
3. <https://jmedicalcasereports.biomedcentral.com/articles/10.1186/s13256-019-2198-1>
4. Job CK. Pathology of leprosy. In: Hastings RS, Oromolla DVA, editors. Leprosy. 2nd ed. Churchill Livingstone; Philadelphia: 1994. pp. 190-233.
5. Ooi WW, Srinivasan J. Leprosy and the peripheral nervous system: basic and clinical aspects. Muscle Nerve. 2004;30:393-409.