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Case Report

Multiple nerve abscesses on cutaneous radial nerve - a case of pure neural leprosy

BS Ankad[1], A Jawalgi[2], VD Dombale[3], S Telkar[4]

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Leprosy is a unique infectious disease due to varied spectrum of clinical signs it exhibits. Pure neural leprosy (PNL) is an unusual form of leprosy and accounts for 4-8% of all leprosy cases. It can manifest as a simple tingling sensation to complex and tragic motor paralysis. Here we report a case of PNL involving isolated cutaneous radial nerve as multiple abscesses along the course of the nerve. To the best of our knowledge, this is rarest presentation of pure neural leprosy.

Key words : pure neural, cutaneous nerve, radial, abscesses.

Introduction

Leprosy is a chronic granulomatous disease caused by *Mycobacterium leprae* and is one of the most common peripheral nerve diseases in the world (Girdhar 1996). Although prevalence of the disease is decreasing, leprosy continues to be a major cause of infective neuropathy in tropical and subtropical countries (de Freitas-Marcos et al 2004). The pure neural leprosy (PNL) is a well recognized clinical entity comprising 4-8% of leprosy patients and it affects only the nerves without skin lesions (Wilder-Smith 2002). The PNL commonly involves ulnar, median and lateral popliteal nerves. Cutaneous nerves like sural, superficial radial and musculocutaneous are rarely affected (Sharma and Malhotra 2008). Nerve abscesses in PNL are very occasionally documented and multiple nerve abscesses along the course of a single cutaneous nerve is not reported so for. We report a rare presentation of PNL, involving isolated cutaneous radial nerve in the form of multiple nerve abscesses.

Case Report

A 24 year old female attended Dermatology outpatient department with a history of painful swellings on the right forearm since 6 months. Examination revealed four abscesses situated along the course of cutaneous radial nerve and it was thickened and tender with sensory impairment on dorsum of right hand. There were no signs of motor paralysis. Abscesses were skin coloured, tender, round, mobile and measured 1.5 X 2.0 cm (Figure 1). Neither hypopigmented patches nor abscesses were found elsewhere on

[1] BS Ankad, MD, Department of Dermatology, S. Nijalingappa Medical College, Bagalkot, Karnataka, India.
[2] A Jawalgi, MBBS, Post Graduate Student, Department of Pathology, S. Nijalingappa Medical College, Bagalkot, Karnataka, India.
[3] VD Dombale, MD, Department of Pathology, S. Nijalingappa Medical College, Bagalkot, Karnataka, India.
[4] S Telkar, MS, Department of Surgery, S. Nijalingappa Medical College, Bagalkot. Karnataka, India.
Correspondence to: BS Ankad **E-mail:** drbsankad@gmail.com

Figure 1: Multiple nerve abscesses along the course of cutaneous radial nerve with thickening of same nerve.

the body. Other peripheral nerves were unaffected. Constitutional symptoms were absent. Systemic examination was unremarkable. Hematological and urine analysis were normal.

One of the abscesses was excised and subjected to histopathology. H & E section of abscess showed well formed granulomas in the dermis involving nerve fibres (Figure 2). Granulomas were composed of epitheloid cells, lymphocytes & multinucleated giant cells (Figure 3). Fite farraco stain for lepra bacilli was negative. On the basis of these findings, the diagnosis of pure neural (Borderline Tuberculoid) leprosy in

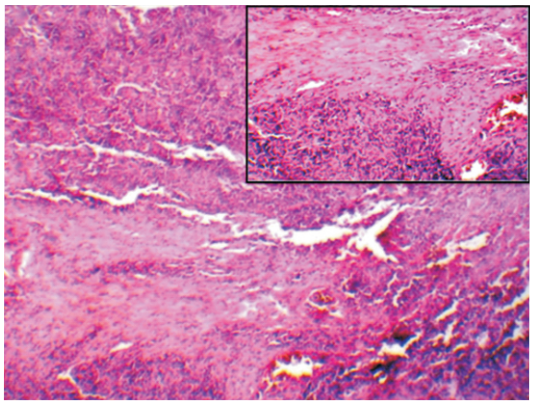

Figure 2: H & E (4X) - showing granuloma around the nerve fibre. Inset H & E (10X) - granuloma invading the nerve

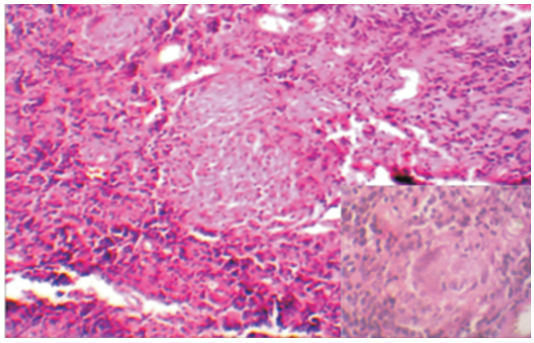

Figure 3: H&E (10X) - Well formed granuloma. Inset - H&E (40X) - multinucleated giant cell & epitheloid cells

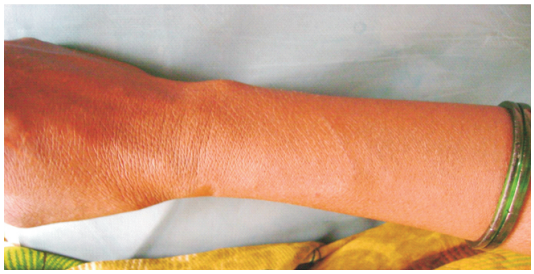

Figure 4: Complete remission of nerve abscesses after treatment

downgrading type 1 reaction with multiple nerve abscesses was made. The patient was given oral steroids for 3 months in a tapering dose and with WHO multidrug therapy (MDT) regimen. After treatment, there was complete remission of all the abscesses (Figure 4).

Discussion

Pure neural leprosy (PNL) was recognized as a separate group by Wade in 1952. However it is difficult to classify and finds a mere passing reference in the Ridley-Jopling classification of leprosy (AILWC 1995). Most of the time, it is not appreciated by the patient as well as physician due to the absence of hypopigmented patches. Hence it is overlooked or misdiagnosed (Jopling and Morgan-Hughes 1965).

PNL presents with variety of manifestations. Haroon et al (2007) studied 5 PNL cases presenting as only arthritis of the hands and feet. Patients had thickened peripheral nerves and sural nerve biopsy confirmed the diagnosis.

In PNL, majority of patients present with sensory impairment, 5-10% present with deformity and rarely with nerve abscess (Sharma and Malhotra 2008). Our patient had sensory impairment in the area supplied by radial cutaneous nerve without deformity. Kumar et al (1996) described two unusual cases of tuberculoid PNL and lepromatous leprosy with nerve abscesses. Both cases were resolved with surgical decompression. Laxmisha et al (2004) described a patient of PNL with multiple nerve abscesses involving left supratrochlear, left radial cutaneous, left digital, left saphenous and right superficial peroneal nerve.

Up to 30% of patients of PNL develop hypo-pigmented patches. In a study by Suneetha et al (2005), 62% of 182 patients developed patches after 2 years of follow up. Another study by Kumar et al (2004), none of 32 PNL patients developed patches after follow up for 2 years. We did not notice hypopigmented patches in our patient even after follow up of 3 years.

Surgical modality such as surgical decompression or incision and drainage was not carried out in this case because of small size of the abscesses. We treated our patient with WHO- MDT and systemic corticosteroids for 3 months resulting in complete regression of all the abscesses.

To conclude, multiple nerve abscesses occurring along the course of a single nerve is very unusual and rare in PNL. Hence, this clinical feature is a new addition to the wide spectrum of signs and symptoms of PNL. Leprosy, a disease of antiquity, always throws challenges to dermatologists to learn more and more to treat patients better.

References

1. All India Leprosy Workers Conference (1995). Classification of leprosy adopted by the Indian Association of Leprologists. *Lepr India*. **27**: 93-95.
2. de Freitas Marcos RG, Nascimento Osvaldo JM, de Freitas Marcela R et al (2004). Isolated superficial peroneal nerve lesion in pure neural leprosy. *Arq Neuropsiquiatr.* **62**: 535-539.
3. Girdhar BK (1996). Neuritic leprosy. *Indian J Lepr.* **68**: 35-42.
4. Haroon N, Agarwal V, Agarwal A et al (2007). Arthritis as presenting manifestation of pure neuritic leprosy - a rheumatologist's dilemma. *Rheumatol*. **46**: 653-656.
5. Jopling WH and Morgan-Hughes JA (1965). Pure neural tuberculoid leprosy. *Brit med J.* **2**: 799-800.
6. Kumar B, Kaur I, Dogra S et al (2004). Pure neuritic leprosy in India: an appraisal. *Int J Lepr Other Mycobact Dis*. **72:** 284-290.
7. Kumar GR, Ramana PV, Vasundhara N et al (1996). Two unusual nerve abscesses - lepromatous leprosy and pure neural leprosy: case reports. *Lepr Rev.* **67**: 217-221.
8. Laxmisha C, Thappa DM, Senthil Kumar M et al (2004). Pure neural leprosy presenting with multiple nerve abscesses. *Indian J Lepr*. **76**: 343-350.
9. Sharma VK and Malhotra AK (2008). Leprosy: classification and clinical aspects. In: IADVL Text Book of Dermatology, 3rd edn, Vol II (Valia RG and Valia AR, eds), Bhalani Publishing House, Mumbai, pp2032-2069.
10. Suneetha S, Sigamoni A, Kurian N et al (2005). The development of cutaneous lesions during follow-up of patients of pure neuritic leprosy. *Int J Dermatol*. **44**: 224-229.
11. Wilder-Smith E (2002). Diagnosis of pure neuritic leprosy. *Neurol J South East Asia*. **7:** 61-63.

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