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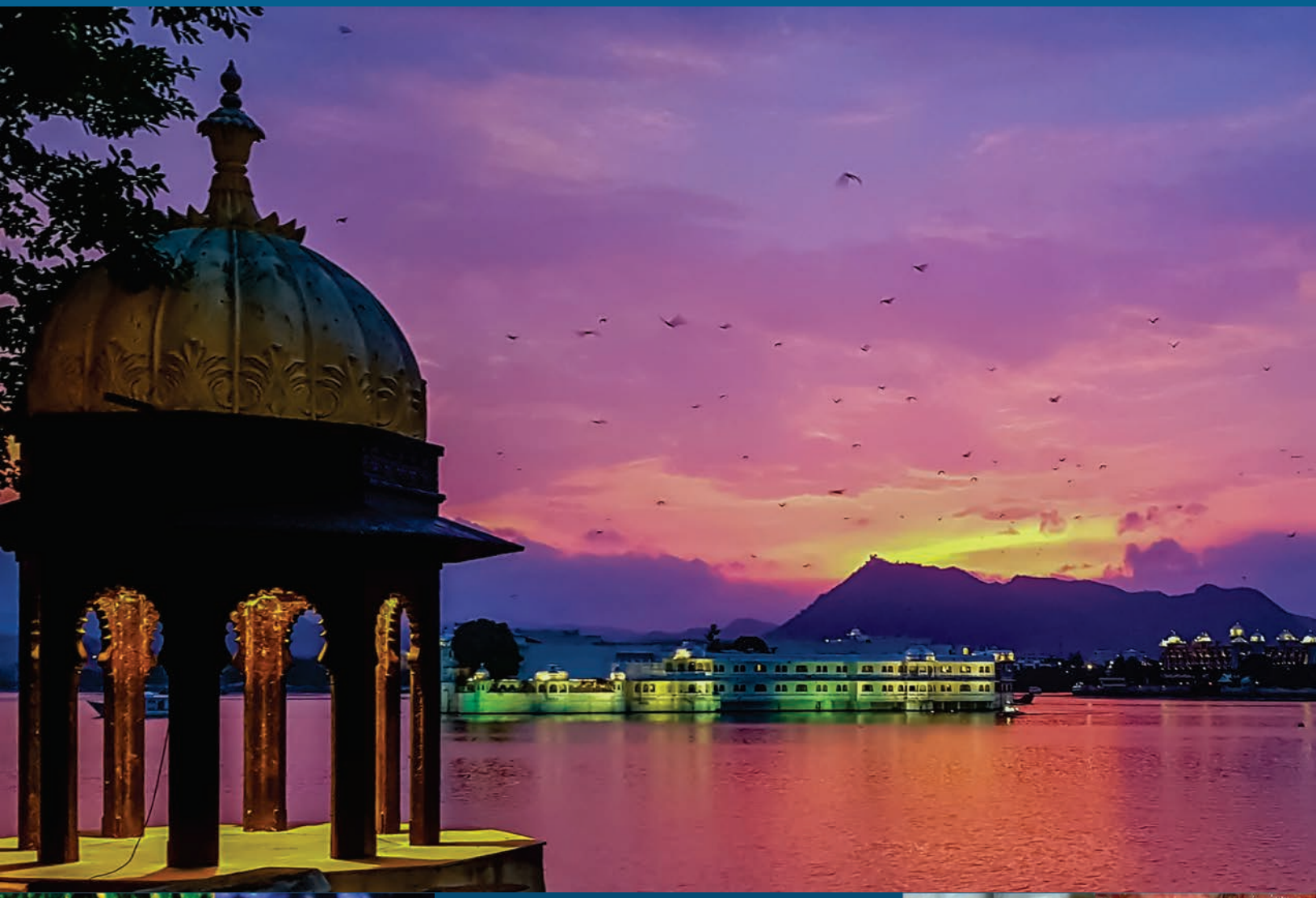

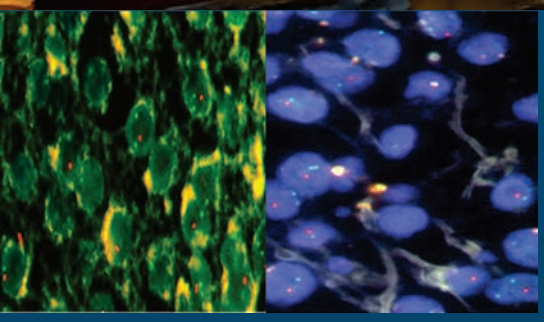

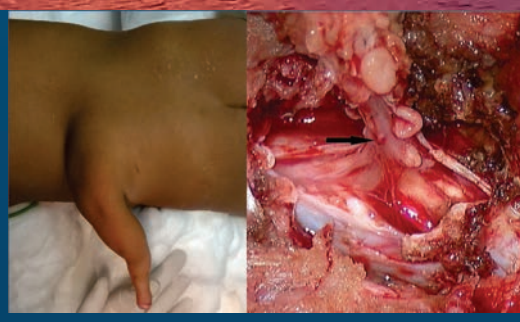

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Medknow

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Guillain–Barré syndrome: A rare manifestation of Hansen's disease

Sir,

Guillain–Barré (GB) syndrome was described by the French neurologists Guillain, Barre, and Strohl. It is an acute autoimmune polyradiculopathy that is characterized by progressive symmetrical muscle weakness.[1] The patients develop acute paralysis with areflexia. It is often preceded by infections such as *Campylobacter jejuni*, *Mycoplasma pneumonia*, *Hemophilus influenza*, cytomegalovirus, and Epstein-Barr virus infections by at least 3 weeks. We report a case of a 45-year-old gentleman presenting with leprosy as a rare cause of GB syndrome.

The patient presented to the hospital with complaints of weakness affecting all 4 limbs since the last 5 days. The weakness was distal as well as proximal. The patient also turned out to be a case of Hansen's disease. This was detected approximately 2 months before his presentation to the hospital as a result of ulceration of the foot. He was off treatment because of gastric ulcerations. There was no other significant medical history. The patient presented with normal higher mental functions and was found to have a power of 2 of 5 proximally and 3 of 5 distally. There was generalized areflexia with bilateral flexor plantar response. The sensory loss was restricted to anesthetic patches on the back and few patches on the trunk. The patient had palpable nerves—bilateral radial and ulnar nerves. The foot lesions had healed in the left foot; however, they persisted in the right foot.

The patient was evaluated for nerve conduction velocity (NCV), which was suggestive of GB syndrome. He was taken up for sural nerve biopsy which showed features that were suggestive of Hansen's disease. The slides were reviewed at 2 teaching institutes and yielded consistent results. Other investigations and possible causes of neuropathy (malarial parasite, hepatitis B surface antigen, human immunodeficiency virus (HIV), rheumatoid arthritis factor, antinuclear antibody, C3, elevated sugars, and thyroid levels) were negative.

The patient was deteriorating rapidly, and therefore, a course of intravenous immunoglobulins (IvIg) was initiated. Dapsone was also initiated. After therapy with IvIg, the patient improved rapidly.

GB syndrome is a neuropathic condition that is characterized primarily by progressive symmetrical weakness and areflexia. Symptoms usually peak at 4 weeks.[1] Several infections affecting predominantly the respiratory and the gastrointestinal tract are implicated in the development of this syndrome.[1,2] While not commonly implicated, vaccination is rarely known to be associated with the syndrome. Influenza, swine flu, tetanus, hepatitis, and more recently, influenza A vaccination are few of the examples that may cause the syndrome.[1,2]

Some of the differential diagnosis of the syndrome include brainstem involvement, spinal cord affliction, muscle and neuromuscular disorders, and polyneuropathies such as chronic inflammatory demyelinating polyneuropathy. The latter is acquired symmetrical, proximal and distal limb weakness and sensory disturbances progressing over 2 months. It is also known to be caused by infective agents such as HIV, hepatitis C, and Hansen's disease.[1,3]

Leprosy is a chronic infection that is caused by *Mycobacterium leprae*. The organism was identified in 1873 by Hansen. It is a neuropathy itself that affects the nerve trunks and cutaneous nerve endings leading to sensory, motor, and autonomic neuropathies. Small fiber neuropathies occur initially whereas the large fiber neuropathies occur late. The most common associations of Hansen's disease are with classical leprosy neuropathy, pure neuritic leprosy, reactional leprosy neuritis, painful small fiber neuropathy, leprosy late onset neuropathy, autonomic neuropathy, and arthritic leprosy.[4-6]

As of now, it has been hypothesized that lepra reaction may lead to the exposure of neural antigens. These antigens may lead to autoimmune reaction, thereby causing GB syndrome.[7,8] Rarely, cases have been known that present as GB syndrome without any evidence of lepra reaction.[9] To conclude, we present a rare case of GB syndrome that was caused by Hansen's disease with no evidence of lepra reaction. To the best of our knowledge, there have been only 1 report of similar presentation reported in the past decade.

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Conflicts of interest
There are no conflicts of interest.

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