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Letter to Editor Open Access

Diffused Lepromatous Leprosy and its Management

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Letter to Editor

We are described here the complications in diffused lepromatous leprosy and its management necessary for leprosy eradication. *Mycobacterium leprae* was the only known cause of leprosy in humans until 2008, when a new species named *Mycobacterium lepromatosis* was found to cause diffuse lepromatous leprosy (DLL) [1]. The phenomenon of such type of leprosy was first discovered in 1852 by Lucia and Alvarado, and named it as Lucio phenomenon [2]. DLL is characterized clinically by diffuse, non-nodular, cutaneous infiltration, manifesting, and recurrent crops of large, sharply demarcated skin lesions. DLL is a rare form of reaction state seen in pure lepromatous leprosy (LL) due to unresponsiveness of the immune system [3-5].

Predominantly, DLL is found in patients of western and central Mexico and the Caribbean countries but several cases have been reported from around the world including India, Iran, Malaysia, Singapore, Hawaii, France, USA, Brazil and Tunisia [6].

DLL cases require management (diagnosis, care, and therapy) that is more specific due to the higher morbidity and even mortality associated with them [7]. Therefore it is necessary to diagnose *M. lepromatoisis* and it is even further important to diagnose it early.

M. lepromatosisis uncultivable bacterium in any culture medium like *M. leprae*, as the bacterium lacks the genes necessary for multiplication outside the host organism. Further, 2.1% divergence was found in 16S rRNA gene of *M. leprae and M. lepromatosis*. The overall genetic divergence was found to be 6 to 14% including 16S rRNA, rpoB and hsp 65 genes of two species responsible for causing leprosy [1].

M. lepromatosis can be diagnosed through rpob and hsp65 with high sensitivity (100%) and specificity (100%) [1]. An effective way of screening for DLL is to focus on lepromatous leprosy cases. DLL has high resemblance with LL cases. All LL cases should be subjected to RLEP along with *M. lepromatosis* specific primers. This will help to differentiate between LL and DLL.

The main regimen for treating DLL patient is multibacillary multi drug therapy (MB-MDT) with an increased dose of clofazimine. DLL does not primarily require treatment with steroids. However, the treatment with prednisone or thalidomide and other systemic corticosteroidsdo improve the outcome of the disease [7,8]. Unfortunately systemic corticosteroids have several severe side effects. Thus an early and proper diagnosis would enable instituting of appropriate treatment and avoid over use of steroids. Also, it would differentiate between a leprosy reaction and DLL thus enabling choice of correct treatment. In case of lack of accurate diagnosis, the DLL cases would continue to be treated with steroids unnecessarily.

Hence it is recommended that all cases of LL be subject to molecular diagnosis to differentiate between LL and ML to ensure appropriate treatment of the cases.

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