

action with lymphocytes and bacillary antigens in the pathogenesis of leprosy reactions and in mechanisms of defense against the bacillus in the various clinical forms of the disease. Studies permitting the evaluation of CRP bound to the surface of lymphocytes from leprosy patients and to bacillary antigens in circulating blood, tissues and cells, and of the possible reactions associated with these mechanisms would contribute to the elucidation of these question.

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THE USE OF MYELIN AND AXONAL STAINS TO ASSESS THE EXTENT OF NERVE DAMAGE IN NEURITIS OF LEPROSY

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Histopathological diagnosis of leprosy in skin & nerve biopsies is usually based on H&E stain to study the general morphology and modified Fite Faraco stain to identify *Mycobacterium leprae*. Since neuritis in leprosy precedes nerve damage, it is important also to evaluate the structural integrity of the nerve by using special stains for myelin and axon.

Solochrome cyanine is a myelin stain where intact myelin is stained brilliant blue and Glees Marshland, stains integral axons black. In this study we carried out regular H&E, Fite Faraco and these special stains - Solochrome and Glees on 10 nerves of leprosy patients in reaction (7BT, 3 BL) and were compared to normal nerve.

The results showed extensive demyelination of axons of BT leprosy nerves and relatively less damage in BL leprosy. Normal nerves showed structural integrity of myelin and axons. When the special stains were compared to H&E, the degree of damage of the nerve corresponded to the extent of endoneural inflammation.

In conclusion Glees & Solochrome stains give a direct & quantifiable evidence of the extent of nerve damage, which is difficult to assess in the regular H&E stain. The use of these special stains in conjunction with regular H&E and Fite stains can help in the individual neuritis patient management, the details of which will be discussed.

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EFFECT OF POLY UNSATURATED FATTY ACIDS IN EDIBLE OILS ON THE GROWTH OF MYCOBACTERIUM LEPRAE IN CBA MICE

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Poly Unsaturated Fatty Acids (PUFA) / Essential Fatty Acids (EFA), supplemented in diet, are reported to mediate immune-suppression. Prostaglandin E2 a metabolite of PUFA also has a suppressive effect on the immune system. *Mycobacterium leprae* is known to scavenge fatty acids and other lipids for cell wall synthesis from the host cell and also to multiply more abundantly in immunologically suppressed hosts. Therefore it was planned to study the effect of PUFA on the multiplication of *M.leprae* within the footpads of normal mice. Coconut oil having a lower PUFA content and groundnut oil with higher PUFA were supplemented in the mice diet. Auto-oxidation of PUFA *in vivo* was inhibited by the addition of antioxidants.

Six groups of 5 CBA mice were used for the study. Group 1 animals were fed with 20% w/w of coconut oil, Group 2 with 20% groundnut oil, Group 3 and Group 4 in addition to coconut oil and groundnut oil were fed with the antioxidants, α -tocopherol acetate (500 ppm) and selenium (1 ppm) respectively. Group 5 was the control group fed with normal diet and Group 6 the controls for antioxidants. The footpads of the animals were inoculated with 1×10^4 bacilli each and one animal in each group was harvested at 6th, 9th, 12th and 15th months.

A significant difference in the peaks of growth phase was observed. Mice fed with high PUFA content and antioxidants peaked by 6th month counting a significant high of 1.09×10^6 bacilli/ml whereas low PUFA diet with antioxidant showed a peak at 12th month (5.45×10^5 bacilli/ml) indicating a slower growth rate. The observation confirms that PUFA may be utilized for the cell wall synthesis and at the same time its immunosuppressive activity favors the growth of the bacilli. Though it is a significant finding, it needs corroboration with a larger study.

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DETECTION OF DAPSONE RESISTANCE MUTATION OF MYCOBACTERIUM LEPRAE FROM KOREAN LEPROSY PATIENTS