ABSTRACT BOOK ABSTRACTS



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PAEDIATRIC DERMATOLOGY

EFFICACY OF CIMETIDINE IN REDUCING DAPSONE INDUCED HAEMOLYSIS AND METHAEMOGLOBINAEMIA AMONG CHILDREN WITH LEPROSY.

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Introduction: One of the important uses of dapsone in dermatology is multi drug therapy (MDT) for leprosy. Haematological side effects of dapsone such as haemolytic anaemia and methaemoglobinaemia are dose related. These effects are caused by N hydroxylation of dapsone, mediated by hepatic cytochrome 450 leading to formation of hydroxylamine dapsone, a potent oxidative metabolite. Co-administration of cytochrome 450 inhibitors have led to reduction of dapsone induced methaemoglobinaemia. However, its efficacy in improving haemolysis has been poorly studied. This entity in relation to children has not been studied.

Objective: To find out efficacy of cimetidine in reducing dapsone induced haemolysis and methaemoglobinaemia among children with leprosy.

Methods and Materials: A clinical trial where eligible and consenting children were randomized into study and control arms. Cimetidine 200mg twice daily was added for first 4 weeks with MDT for the test participants. Haemolysis as assessed by full blood count, blood picture and reticulocyte count was monitored at regular intervals (pretreatment, week 2, 4, 8 and 12). A drop of haemoglobin 2g/dl or above was considered significant. Assessment of methaemoglobin level was done at two weeks of MDT.

Results: Analysis was done in 36 children (24 boys, 12 girls). The percentages of significant haemolysis for the test and control arms were 33.33% and 66.66% respectively. There was a statistically significant reduction of haemolysis among test participants in week 12 (P=0.094, 90%CI=-1.134, -0.010). The mean methaemoglobin levels in the test and control arms were 2.948% (SD: 1.997) and 4.403% (SD: 2.620) respectively. Test group had a 33.05% reduction of methaemoglobin level compared to control group (P=0.069, 90%CI=-2.769, -0.142). None in the study group developed adverse effects attributable to cimetidine.





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Conclusion: A short course of cimetidine is safe and efficacious when combined with dapsone to minimize haemolysis and methaemoglobinaemia among children with leprosy.



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