

EOP 07 HYDROCORTISONE VERSUS PREDNISOLONE FOR TREATMENT OF ADRENAL INSUFFICIENCY (HYPER-AID STUDY)

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INTRODUCTION: Prednisolone is a single daily dose and is a cheaper steroid option compared to Hydrocortisone.

OBJECTIVES: Comparison of Prednisolone and Hydrocortisone in adrenal-insufficiency.

METHODS: A cross-over study of patients with adrenal insufficiency treated at the National Hospital Kandy were switched over from hydrocortisone to equivalent doses of low dose Prednisolone. Those on 15mg or 20mg hydrocortisone daily were switched to 3.75mg prednisolone and those on higher doses (22.5 to 35mg) were switched to prednisolone 5mg. A preliminary analysis was performed comparing means of outcomes by the paired t-test.

RESULTS: 67 patients were recruited and 58 continued Prednisolone for the study period of which 48 were on 3.75mg prednisolone and 10 were on 5mg daily. Their male: female ratio was 1.15:1 and mean age was 49 years. 44 and 14 had secondary and primary adrenal-insufficiency respectively. Six patients had postural drop on hydrocortisone, while none had postural drop on prednisolone. There was no difference in weight and BMI while on either of the drugs, but the waist:hip circumference ratio was 0.97 on hydrocortisone and 0.94 on prednisolone ($p=0.02$). The mean serum triglyceride and HDL levels on Hydrocortisone were 140mg/dl and 52.0mg/dl respectively. When changed to Prednisolone triglycerides reduced to 135mg/dl ($p=NS$) and HDL improved to 57.5mg/dl ($p<0.05$). Mean fasting blood glucose on Hydrocortisone and on Prednisolone was 97mg/dl and 101.7mg/dl ($p=0.14$), and HbA1c was 6.32% and 6.15% respectively. Mean absolute neutrophil count on Hydrocortisone and on Prednisolone was 5.2 and 4.6 ($p=NS$) respectively. The mean SF36 physical wellbeing score on Hydrocortisone was 63, and was 65 on Prednisolone ($p=0.2$). The score for health change was 57 on Hydrocortisone and was 50 on Prednisolone ($p=0.03$). 9 out of 67 patients discontinued prednisolone.

CONCLUSION: Prednisolone is a non-inferior alternative to hydrocortisone in primary and secondary adrenal insufficiency.

