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**Original article  
Effect of high dose inhaled steroids on blood glucose level and lipid profile in diabetic and non-diabetic subjects with asthma  
Lakshmi Dey, Kaushik Basu, Anirban Sinha, Animesh Maiti, Satyam Chakraborty**  
  
Name of the Institute/college: Medical College and Hospital, Kolkata

Corresponding author: Lakshmi Dey

**Abstract:**

**Introduction:** This study is undertaken to find out whether high dose inhaled steroid therapy cause derangement of blood glucose and serum lipid profile in diabetic and non-diabetic patients with asthma.

**Methodology:** Total, 80 cases were selected. The patients were divided into 2 groups. Group 1- comprising of 20 patients who were diagnosed cases of asthma and diabetes mellitus. Patients of both group 1&2 were then prescribed high dose inhaled steroids (1600µ gm/day of Budesonide or 1000µgm/day of Fluticasone) for 4 weeks through meter dose inhaler with spacer. Four weeks after initiation of high dose inhaled steroids the patients were reassessed for improvement or deterioration by clinical signs like respiratory rate, presence of rhonchi, blood pressure. FEV1, fasting and post prandial blood glucose, fasting serum lipid profile (including total cholesterol, HDL cholesterol ,LDL cholesterol, VLDL cholesterol, triglyceride) to detect any change in these parameters from their previous values.

**Results:** Statistically significant improvement in the FEV1 in both groups following inhaled steroid therapy. No statistically significant difference in the post prandial blood glucose levels before and after high dose inhaled steroid therapy in all the groups. No significant difference in the levels of fasting, post prandial blood glucose in the diabetic, non-diabetic patients or in those patients with impaired fasting glucose. No significant difference in the levels of fasting, or post prandial blood glucose in group 1 and 2 patients before and after receiving budesonide or fluticasone.

**Conclusion:** Following 4 weeks of high dose inhaled steroid therapy both groups of patients showed improved asthma control and significant improvement in FEV1. No significant change in the blood glucose and fasting lipid profile in both groups of patients. Even those patients who had impaired fasting glucose did not show any significant change in the blood glucose levels after 4 weeks of inhaled steroid therapy.

**Keywords:** Asthma, High dose inhaled steroid, diabetes, blood glucose, lipid profile.