



MEDICAL THERAPIES AND PHARMACOLOGY

## **EFFICACY OF LOW-DOSE METFORMIN AND LOW-CALORIE DIET IN THE MANAGEMENT OF ACANTHOSIS NIGRICANS OF NECK: A CLINICAL STUDY**

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**Introduction:** Acanthoses Nigricans (AN) is a common skin problem, and a major cosmetic issue, amongst obese individuals. Benign type of AN is associated with insulin resistance – this underlying insulin resistance has to be corrected before we can begin to manage AN.

**Objective:** To study efficacy of Low-dose Metformin and Low-calorie Diet in the management of benign AN of Neck.

**Materials and methods:** 23 non-diabetic, thoroughly investigated adult patients (F: 15, M: 8), with benign AN affecting Neck, randomly divided into two groups. Study group (12 patients) received Oral Metformin (250mg/day) and a low-calorie diet for a period of 3 months. Control group (11 patients) received Oral Placebo and normal diet for 3 months. Patients in both groups were advised to apply Mometasone- Salicylic acid combination in ointment base, once daily, over the affected areas till the disappearance of patches, or for a period of 3 months - whichever happened earlier. Follow up was done for another 3 months. Photographs were taken at the beginning, and at end of 3 & 6 months. Severity of AN, and treatment progress, was calculated by using Burke's scale.

**Results:** Significant changes in Neck severity and texture were recorded in all cases in Study group by day-90, and the improvements persisted in 10 cases (83.3%) till 6 months. Two cases showed mild relapse of AN.

Mild to Moderate changes in Neck severity and texture were recorded in all cases in Control group by day-90. All the skin lesions of AN returned completely in all patients by the end of 6 months.

**Conclusions:** Low-dose Metformin therapy with Low-calorie diet for benign AN of neck with Insulin resistance has a significant beneficial effect. It is safe and well tolerated.

