ACNE, ROSACEA, AND RELATED DISORDERS (INCLUDING HIDRADENITIS SUPPURATIVA)

CORRELATION OF GLYCEMIC INDEX AND SERUM INSULIN LIKE GROWTH FACTOR-I WITH ACNE VULGARIS AND ITS SEVERITY

Akshika Mukhija [(1)]

Sri Aurobindo Medical College And Pg Institute, Dermatology, Venereology And Leprosy, Indore, India [(1)]

BACKGROUND: Acne vulgaris is a chronic inflammatory disease of the pilosebaceous unit. Pathogenesis being multifactorial includes combination of genetic, inflammatory and environmental factors. It is associated with westernization which is attributable to dietary changes. High glycemic diet has shown to be important in acne pathogenesis. However, it is a subject of much controversy. Insulin like Growth Factor-1 (IGF-1) is a pleiotropic growth factor influencing normal and pathological growth. Implications of increased IGF-1 levels in acne suggest acne as a syndrome of insulin resistance, also predicting its severity.

OBJECTIVES: To determine GI and serum IGF-1 levels in patients with acne and healthy controls, and to correlate them with the presence and severity of acne.

MATERIAL AND METHOD:
• 200 individuals (100 patients each of study and control group) were included in the study Clinical diagnosis of acne was made and the severity of acne was assessed on the basis of Global Acne Grading System.
• A three day diet history was taken and GI was determined by dietary glycemic loads in acne patients and healthy controls.
• Levels of IGF-1 was determined using the R&D Systems Human IGF-1 enzyme-linked immunosorbent assay kit (Cat. DG 100).

RESULTS:
• Comparison of GI and IGF-1 between cases and controls showed high significance (p=0.000).
• GI and IGF-1 across the spectrum of mild, moderate, and severe acne showed p-value to be highly significant between mild and severe acne (p=0.000).
• Thus showing more severe acne in patients taking high GI foods with increased serum IGF-1 levels.

CONCLUSION: High GI food correlated with high serum IGF-1 levels, which further exacerbate acne due to insulin resistance, hyperinsulinemia, increased androgen

bioavailability, sebum production and keratinocyte proliferation. Therefore, diet and IGF-1 has shown to be important in acne pathogenesis.