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ASSOCIATION OF METABOLIC SYNDROME WITH VITAMIN D DEFICIENCY AT TERTIARY CARE HOSPITAL OF KARACHI

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ABSTRACT

OBJECTIVE: To determine frequency of vitamin D deficiency among patients with metabolic syndrome.

METHODS: This cross-sectional study was conducted at Jinnah Postgraduate Medical Centre, Karachi-Pakistan from 30/2/2020 to 30/7/2020**.** Data were prospectively collected from patients, meeting the diagnostic criteria with ≥3 of the following risk factors:

1. A centrally distributed obesity with waist circumference >90 cm in men & >80 cm in women
2. Elevated levels of triglycerides (>150 mg/dl)
3. Decreased HDL (<40 mg/dl in men; <50 mg/dl in women)
4. Systolic blood pressure >130 mmHg; diastolic blood pressure >85 mm Hg
5. Elevated levels of fasting glucose i.e. >110 mg/dl

Fasting blood (05ml) was collected in morning, serum separated and stored at -70°C for subsequent analyses of vitamin-D by ELISA. Effect modifiers were controlled through stratification to see the effect of these on the outcome variable.

RESULTS: Out of 193 patients with metabolic syndrome, 82 (42.5%) patients were males and 111 (57.5%) were female. Vitamin D deficiency was observed in 73/193 (40.9%) subjects. Mean age, duration of disease, serum glucose, height and weight in our study was 52.78±8.81 years, 2.21±1.18 years, 210.65±12.52 mg/dl, 158±7.28 cm, and 78.7±9.87 kg respectively. Age, gender, and educational status were the most important risk factors that might be leading to vitamin D deficiency in metabolic syndrome patients (p-value <0.05).

CONCLUSION: Vitamin D deficiency is highly prevalent in patients with metabolic syndrome. Large scale studies are needed for identification of the risk factors leading to vitamin D deficiency in patients with metabolic syndrome.

KEYWORDS: Metabolic Syndrome (MeSH); Vitamin D Deficiency (MeSH); Obesity (MeSH); Diabetes Mellitus (MeSH); Hypertension (MeSH); Dyslipidemia (MeSH); Hyperglecemia (MeSH); Insulin Resistance (MeSH); Abdominal Obesity (MeSH).

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CONFLICT OF INTEREST

Authors declared no conflict of interest

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