

Obesity and Vitamin D Deficiency in Adolescents

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Introduction

The prevalence of common obesity has become an issue of major public health concern across the globe. Studies conducted world wide have shown an association between common obesity and vitamin D deficiency. Vitamin D deficiency can account for the secular trends in the prevalence of obesity and for individual differences in its onset and severity. Thus it may be possible to reverse the increasing prevalence of obesity by improving the vitamin D status.

Aims

Is to evaluate the effect of treatment with vitamin D in obese adolescents.

Materials and methods

Over a period of 6 months starting from Feb 2011 to July 2011 obese adolescents (n=50) with established vitamin D deficiency are divided into two groups and both groups are subjected to therapeutic life style changes. One group was treated with vitamin D and the

other group was not treated. Their BMI, FBS, lipid profile, vitamin D levels and CRP at baseline and at the end of 6 months are measured and compared.

Results

The vitamin D treated group showed significant improvements as compared to the vitamin D untreated group.

Discussion

Subclinical vitamin D deficiency is a commonly unrecognised disorder in obese adolescents treatment of which can result in significant reductions in risk of future diabetes and CAD.

Conclusion

Vitamin D which was once thought to be important only for bone and mineral metabolism has been recently proven to be beneficial in the prevention of diabetes, obesity and metabolic syndrome which may all ultimately increase the risk of coronary artery disease. Hence the early recognition and treatment of this condition is essential to reduce future risk of CAD in obese adolescents.

	VitD treated group	VitD untreated group	P value
BMI	(-2.5 to 3.6)	(-0.8 to 1.8)	<0.0012
FBS	(-8 to 14 mg%)	(-5 to 7)	<0.001
TOTAL			
CHOLESTROL	-40 to 60 mg%	(-15 to 28)	<0.0144
LDL	(-20 to 30 mg%)	(-12 to 16)	<0.001
CRP	(-0.4 to 0.6)	(0.2 to 0.4)	<0.012