

Objective

A poor vitamin D status has been related to an increased risk of cardiovascular disease Carotid intima media thickness has shown to be an early marker of subclinical atherosclerotic Our aim was to assess the relationship between hypovitaminosis D and intimal medial thickening (IMT) of the common carotid artery as a marker of preclinical atherosclerosis

Material and Method

In a Cross sectional study 78 Type 2 diabetic patients attending the Diabetes and Endocrinology clinic in Kasr El Ani hospital

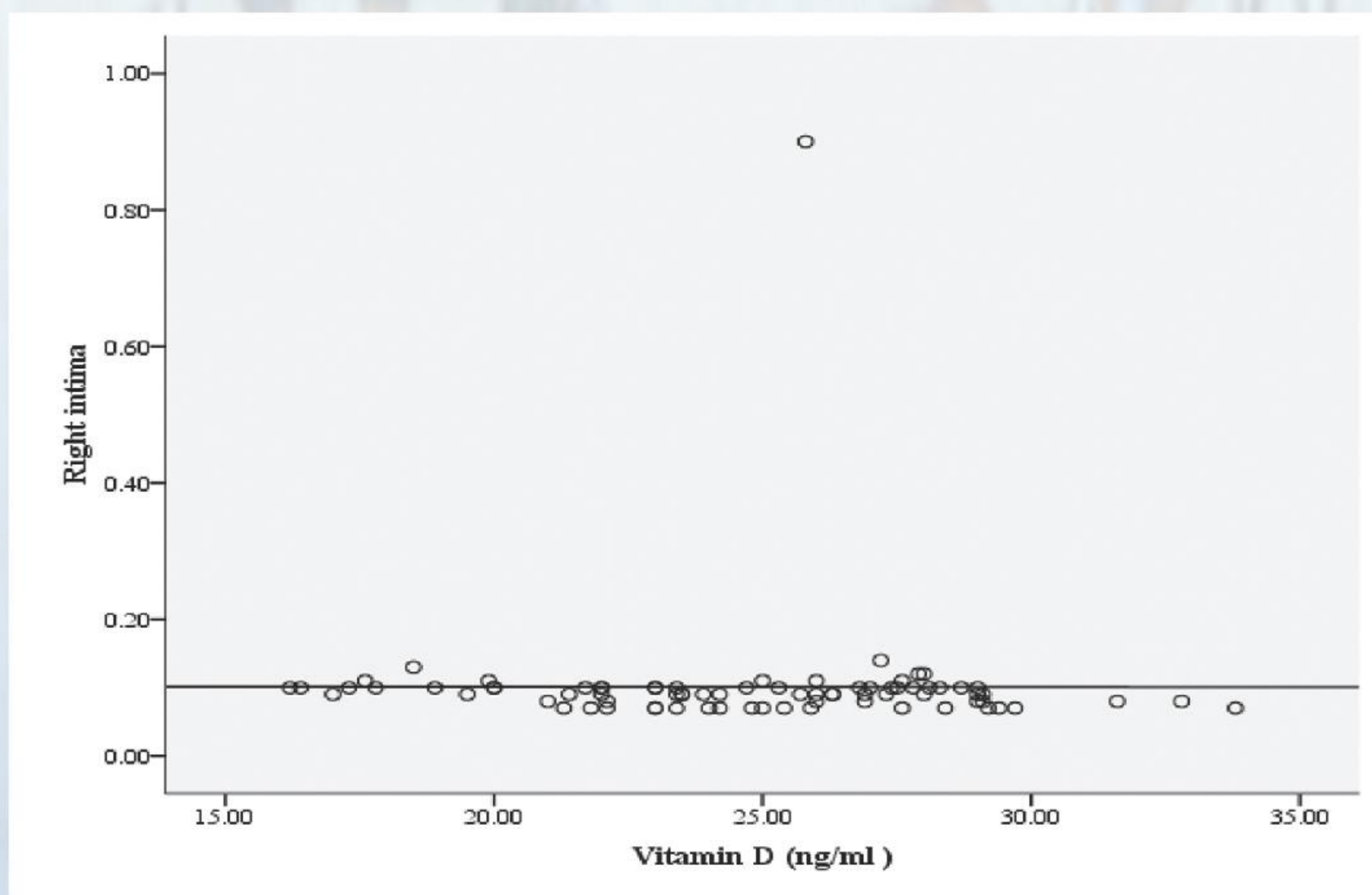
All patients were subjected to: Full medical history Complete physical examination. BMI, waist circumference fasting glucose, HOMAIR, serum cholesterol, triglycerides, LDL, HDL 25(OH) vitamin D measurement, carotid doppler to measure intima media thickness of the distal common carotid

Results

Diabetics with normal CIMT (n=26) all with sufficient Vit D, Diabetic with increased CIMT n=52 (40 sufficient 76.9%, 12 insufficient 23.1%)

6 Patients with increased CIMT had carotid plaque Only one patient had vit D insufficiency, all 5 patients had sufficient vit D Vit D negatively correlated with Rt intimal media thickness however not statistically significant (r=-0.003, p=0.981)

Negative correlation between fasting blood glucose and vit D statistically significant (r=-0.415, p < 0.001). Negative correlation between cholesterol and Rt intima (r=-0.340, p=0.002)



comparison of different parameters between sufficient and insufficient vitamin D

	Vitamin D status				P value
	Insufficiency		Sufficiency		
	Mean	Standard Deviation	Mean	Standard Deviation	
age	51.00	9.20	48.55	8.36	0.360
diabets	8.50	1.83	7.18	3.45	0.203
Systolic BP	139.17	13.79	133.94	16.81	0.313
Diastolic BP	89	8	88	12	0.587
weight	84.00	14.93	84.21	12.55	0.958
BMI	33.83	5.47	33.05	5.09	0.627
Vitamin D (ng/ml)	18.26	1.40	25.91	2.90	<0.001
FBG	195.50	47.06	180.02	46.88	0.296
HOMA	4.86	1.11	6.24	2.81	0.005
Cholesterol	190.67	32.09	199.91	36.82	0.418
TG	94.08	45.59	108.65	55.05	0.391
HDL	41.58	7.48	40.24	8.51	0.611
LDL	136.58	25.20	133.24	34.19	0.748

Conclusion

Low serum 25(OH)D has no consistent association with mean IMT. Thus could not predict subclinical atherosclerosis in diabetics, the contribution of the local activated vitamin D system within atherosclerotic plaque has not been appropriately investigated yet. Therefore, both basic research studies and clinical trials are needed for better elucidating the therapeutic and path physiological role of vitamin D in atherogenesis and CV diseases.

Reference

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key words

Diabetes, atherosclerosis, carotid media

