



ΔΗΜΟΚΡΙΤΕΙΟ
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Twofold benefit of RIA serum 25-hydroxycalciferol in patients with metabolic syndrome: monitoring risk and augmenting analogous treatment

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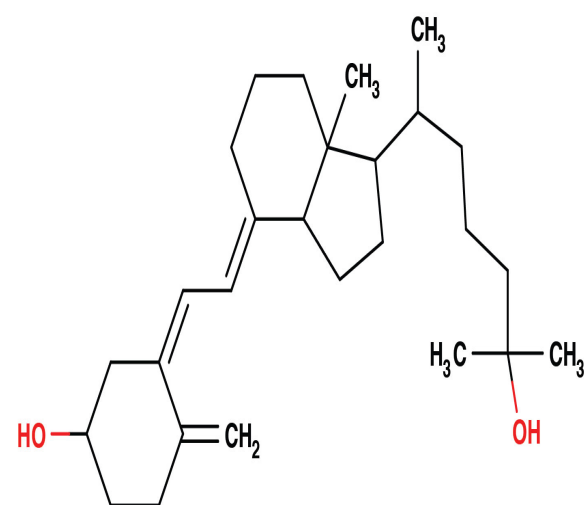
INTRODUCTION-BACKGROUND

- ❑ **Metabolic syndrome (MetSy)** is currently characterized as the 21st century illness
- ❑ MetSy is invariably linked with android obesity & consists of a combination of metabolic disorders with resultant increased risk of CVS, atherosclerosis, & DM type 2
- ❑ **Hypovitaminosis D** has been shown to be linked with a variety of the aforementioned metabolic conditions

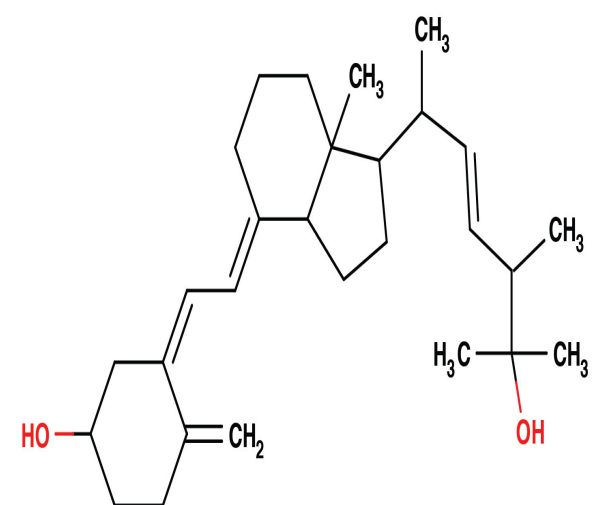


OBJECTIVE OF THE STUDY

- As an integral part of our ongoing research, this study aimed to assess serum 25-hydroxycalciferol [25(OH)D₃ or vitamin D] values in patients suffering from MetSy; correlation with disease etiology &/or severity was also attempted



25-hydroxyvitamin-D3



25-hydroxyvitamin-D2



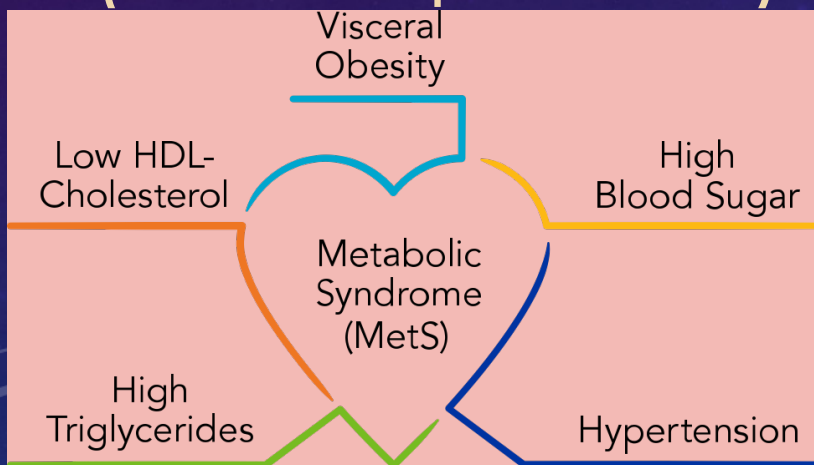
METHODOLOGY

Patients with suspected MetSy: N° & gender	Mean age (yrs)	Control sample	Methods	
116: 92 men 24 women	49 ± 4	30 healthy blood donors	Patients were considered to have MetSy if they fulfilled at least 3/5 diagnostic criteria regarding: waist circumference fasting serum glucose systolic and/or diastolic blood pressure triglycerides HDL-cholesterol	Determination of serum levels of 25(OH)D3 in all patients was performed using the radioimmunoassay/RIA method through the 25-OH Vitamin D total RIA kit (Immunotech, Prague, Czech Republic)



RESULTS

- According to the results, a statistically significant number of patients with **hypovitaminosis D** suffer from **MetSy** compared with the control group (24.4%, $p < 0.05$)



Vitamin D status	Percentage of MetSy patients
Mild hypovitaminosis D	36.5%
Progressive insufficiency	21.3%
Advanced deficiency	16.4%



DISCUSSION

- ❖ Vitamin D participates in various cellular processes, including mitochondrial function, reduction of inflammation, and antagonism of oxidative stress
- ❖ In agreement with various studies, our findings indicate vitamin D insufficiency or deficiency to be signifying **MetSy risk**



CONCLUSIONS

❖ **RIA assessment of 25(OH)D3** may be proven a useful additional means for monitoring **MetSy** risk as well as guiding dietary **vitamin D** supplements

in order to aid the proper functioning of the immune and metabolic systems, thus modifying disease progression



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**THANK YOU
FOR YOUR TIME AND
ATTENTION**

