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Original Research Paper

Cardiology

CVS EFFECTS WITH LOW VITAMIN D3 (REVIEW LITERATURE)

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ABSTRACT Severe epidemiological studies suggested that there is a strong association between Low vitamin –D developing Cardio vascular diseases (CVD).
CVD considered to be the main cause of death in india. Low vitamin D is predictor for all cause cardio vascular mortality.

KEYWORDS : Hypertension , Diabetes , LVH , Heart strokes, Vitamin D

Modifiable Risk Factor	**Non modifiable Risk Factor(1)**
1. Low Vitamin D	Male sex
2. Smoking & Alchol	Age
3. HTN & Diabetes	Elderely Patient
4. Hyper lipidemia	Family H/O CAD +ve
5. Obesity / Stress / Physical Inactivity	

Defination:-
Vitamin-D Deficiency < 20 ng/ml
Vitamin –D Insufficiency 21-29 ng/ml .

Vitamin –D (2 In Active Precursors):-
1. Vitamin D3 (Chole calciferol) Endogenous production
2. Vitamin D2 (Ergo Cholecalciferol) Exogenous production

Mechanism :- Low Vitamin D & Cardio Vascular Diseases
1. 1, 25(OH)-D regulates R.A.Axis by direct suppression of Renin gene expression
2. Vascular smooth muscle & Endothelial cell – Express Vit D Receptor & ability to convert 25 (OH) To 1,25 (OH) Vitamin D
3. Vitamin D Deficiency Triggers Secondary Hypo parathyroidism

Functions Of Vitamin-D :-
1. Increase Intestinal absorption of calcium
2. Expand to find Vit D Receptor
3. Vit D Deficiency Promotes Hypertension leading to LVH
4. Vitamin D Deficiency considered as a marker of chronic non specific illness, rather than contributor to direct disease pathogenesis
5. Low vitamin –D causes LVH
6. Vitamin D increases Serum Calcium & Phosphate

Recommended Daily Doses :-
1. 600 IU Daily for 0- 12 months age
2. 1000 IU Daily for 1- 70 yrs
3. 800 IU Daily > 71 yrs .

Conclusion :-
1. LVH seen in patients with Absent Vitamin –D Receptor (2)
2. Vitamin D- Deficiency In Haemodialysis patients increases CVS Mortality(3)
3. Normal Vitamin-D Levels Decreases Fracture rates & maximal parathyroid suppression
4. Ultra violent rays are best natural source of vitamin D
5. Vitamin –D shows to have Immuno supressive effects & have important role in atherogenesis

REFERENCES :-
1. 25 (OH) - Vitamin (D) & its relation to physial activity & other heart diseases risk factors (Ann Epidemial - 2- 697-703) 1992.
2. Vit - D Deficiency in Vit - D receptor knock out mice; Role of Systemic & cardiae RAS System American Journal Physical Endocrimal metabolisim - 288 : E-125-E-132-2005]
3. American Heart Association Councils on Kidney in Candiovascular system - Clinical cardiology & Epidemiology & Prevention, Circulation (108;2154-2169,2003)