**Vitamin D and Arterial Stiffness**

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**Introduction:** The correlation between the arterial stiffness and Vitamin D has been examined in a certain studies. Measurement of the arterial stiffness has been recommended in a new ESC/ESH guidelines for the arterial hypertension.

**Material and Method**: In order to evaluate arterial stiffness, the measurement of aortic pulse wave velocity, (APWV) and Augmentation Index (AI) was performed using Agedio Arteriograph. The estimation of cardiovascular risk factors was performed in all 88 subjects and two group were formed. Vitamin D has been evaluated in a hypertensive and normotensive patients. The open outpatient controlled prospective study has been designed.

**Results:** Preliminary results showed the significant increase in PWV with average values of 10, 1 m/sec in hypertensive patients compared to 7, 7 m/sec in normotensive ones. The Augmentation index was borderline at 32, 75%, ranging from 24-56% vs 27, 25%. Average blood pressure was 172/109,5mmHg, compared to 128/82 mmHg and heart rate was 70b/min in average vs. 89,5b/m. Vitamin D average level in hypertensives was 16,9ng/ml compared to 28,0 ng/ml in normotensive ones.

**Conclusion:** The arterial stiffness has been proved significant in hypertensive patients with vitamin D defficiency.