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## Features of myocardial deformation and arterial stiffness in hypertensive men with low testosterone

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**N** inety six non-obese male hypertensive patients were screened for the androgen deficiency symptoms via MASSQ questionnaire. 82 subjects with suspected low total testosterone (TT) were included into the study for subsequent TT measurement. 51 patients with confirmed androgen deficiency (group 1) and 24 hypertensive male with normal TT (group 2) were exposed to further examination. 18 healthy men of comparable age were recruited as a control group. The lower TT was associated with higher systolic BP, but not with diastolic BP, and also with the prevalence of nondipper pattern. TT significantly correlated with age (r=0.46, p<0.05), aaoPWV (r=0.32, p<0.05), AIx (r=0.26, p<0.05), correlation with LV mass index and LVEF was non-significant. Global longitudinal strain (GLS) becomes markedly declined in subjects from group 1 and group 2 (up to -17%) compared to the control group. GLS in group 1 was decreased the most, it was in strong correlation with aoPWV (r=0.38, p<0.05). There was no significant difference between group 1, group 2 and control group in circumferential and radial strain. The multiple regression analysis has shown the relationship between TT and SBP, aoPWV, GLS. The study demonstrates the additional influence of low TT on the development of cardiovascular remodeling in men with hypertension. Enhanced arterial stiffness and reduced myocardial deformation in these subjects not only reflects the normal aging processes, but also may be the reason of an unfavorable BP circadian pattern.

## **Biography**

Olesia Nasonenko is currently pursuing her Post-graduation from Zaporizhzhia State Medical University in Ukraine. She is also working on a PhD thesis "Optimization of diagnostics and treatment of hypertension in men with androgen deficiency".

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