

Increased arterial stiffness in female to male transsexuals treated with androgen.

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Abstract

[Aim] Female-to-male (FTM) transsexuals are treated with long-term and high-dose androgen. Although androgen is known to affect the cardiovascular system, vascular function in FTM transsexuals has not been fully elucidated. The aim of this study is to evaluate the arterial stiffness in FTM transsexuals treated with androgen.

[Methods] We evaluated the arterial stiffness in 111 FTM transsexuals (63 untreated FTM transsexuals and 48 FTM transsexuals treated with androgen) using a volume-plethysmographic apparatus equipped with a multi-element applanation tonometry sensor.

[Results] There were no significant differences in age, body mass index, and heart rate between the untreated FTM transsexuals and those treated with androgen. The systolic and diastolic blood pressures in FTM transsexuals treated with androgen were significantly higher than those in untreated FTM transsexuals. The level of brachial-ankle pulse wave velocity (baPWV) in FTM transsexuals treated with androgen ($1,202.8 \pm 138.2$ cm/sec) was significantly higher than that in untreated FTM transsexuals ($1,080.2 \pm 113.7$ cm/sec) while there was no significant difference in the carotid augmentation index (cAI) between untreated FTM transsexuals and those treated with androgen.

[Conclusions] Long-term and high-dose administration of androgen is likely to cause increased arterial stiffness in FTM transsexuals. To prevent atherosclerosis and cardiovascular events, a periodic checkup and pharmacological therapies for hypertension should be tailored on an individual basis.