

3rd International Conference on Surgery and Anesthesia

November 17-19, 2014 Chicago, USA

Relation between low serum testosterone level and peripheral arterial disease in men and clinical evaluation of effect of testosterone administration

K V Shivanand Reddy, Thrishuli P B and Manjunath Shenoy
JSS Medical College, India

Background: The role of testosterone in the development of peripheral artery disease in men is controversial. The evidence that men have a greater incidence of peripheral artery disease than women of a similar age suggests a possible causal role of testosterone. Conversely, recent studies have shown that the hormone improves endothelium-dependent relaxation of peripheral arteries in men.

Aims and Objectives: Accordingly, aim of the study was to assess the association between low serum testosterone level and peripheral artery disease in men and also to evaluate the effect of acute administration of testosterone on peripheral artery disease in men.

Methods and Results: After evaluating the patients with peripheral arterial disease, 40 men (mean age, 45±4 years) with peripheral artery disease underwent ABPI. All the 40 patients had low testosterone levels according to their age. The ABPI was again performed after 9 doses of administration of testosterone (25 mg im thrice in a week). All patients showed improvement in ABPI by at least 0.1. The Patient also had improvement in pain, according to visual analogue scale and also walking distance of 32 patients improved among 40 after testosterone administration (579±204 versus 471±210 metres; $P<0.01$).

Conclusions: This study shows that low serum testosterone associative with lower extremity PAD in elderly men. Short-term administration of testosterone induces a sex-independent vasodilation in peripheral conductance and resistance arteries *in vivo*. Acute testosterone-induced vasodilation of resistance vessels is mediated in part by endothelium-derived NO. ATP-sensitive K⁺ channels appear to play a role in the vasodilatory effect of testosterone in resistance arteries. Future prospective and interventional studies are needed to establish possible causal relationships between sex steroids and the development of lower extremity PAD in men

Biography

K V Shivanand Reddy has completed M.B.B.S at the age of 23 years from Rajiv Gandhi University, Bangalore and doing his residency in General Surgery from JSS Medical College, Mysore. He has published more than 10 papers in reputed journals.

shivanand0288@gmail.com