Researchers propose a relationship between androgen deficiency and cardiovascular disease

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Researchers from Boston University School of Medicine (BUSM) in collaboration with researchers from Lahey Clinic Northshore, Peabody, Mass., believe that androgen deficiency might be the underlying cause for a variety of common clinical conditions, including diabetes, erectile dysfunction, metabolic syndrome and cardiovascular disease (CVD). These findings appear in the September/October issue of the *Journal of Andrology*.

Androgens are a steroid hormone, such as testosterone, that controls the development and maintenance of male characteristics. In a number of studies, androgen deficiency has been linked to an increased mortality in men. Testosterone (T) is an anabolic hormone with a wide range of beneficial effects on men's health. However, according to the BUSM researchers, the therapeutic role of T in men's health remains a hotly debated issue for a number of reasons, including the purported risk of prostate cancer.

To evaluate the relationships between T deficiency and risk factors of CVD and to determine the implications of androgen deficiency in men with cardiovascular risk factors, the researchers performed a comprehensive literature search with the use of Pub Med from 1980 through 2008. Relevant articles pertinent to androgen deficiency and vascular disease were evaluated and it was determined that a relationship did exist between androgen deficiency and CVD.

"In view of the emerging evidence suggesting that androgen deficiency is a risk factor for CVD, androgen replacement therapy could potentially reduce CVD risk in hypogonadal men. It should be emphasized, however, that androgen replacement therapy should be done with very thorough and careful monitoring for prostate diseases," said lead author Abdulmaged M. Traish, MBA, PhD, a professor of biochemistry and urology as well as the director of Laboratories for Sexual Medicine, Institute for Sexual Medicine at BUSM.

To further elucidate the role of androgen deficiency in vascular disease, the researchers recommend large, long-term, double-blind, randomized, placebo-controlled clinical trials be carried out. "Although challenges might lie ahead regarding how data from such clinical trials are to be properly interpreted and whether long-term safety can be established with T supplementation, these findings warrant definite investigation into the beneficial role that androgens might have in preventing cardiovascular risk in androgen-deficient men," added Traish.

Source: Boston University Medical Center