

THE CORRELATION OF ABDOMINAL AORTIC CALCIFICATION AND VISCERAL FAT OBESITY WITH LOWER URINARY TRACT SYMPTOMS IN BENIGN PROSTATIC HYPERPLASIA

Hypothesis / aims of study

Metabolic syndrome (MetS) has an important role in lower urinary tract symptoms (LUTS)/benign prostatic hyperplasia (BPH) etiologies. We investigated the correlation of abdominal aortic calcification and visceral fat obesity with lower urinary tract symptoms.

Study design, materials and methods

We retrospectively analysed data of male patients diagnosed as LUTS associated with BPH (LUTS/BPH), who visited the urology outpatient clinic from December 2009 to June 2015. Exclusion criteria included diabetes, neurogenic bladder, prostate cancer, bladder cancer, treatment history of LUTS using α 1-adrenoceptor antagonists, antimuscarinics and other drugs for treatment of voiding dysfunction. Visceral fat area (VFA) in each subject was automatically determined by an image at the level of the umbilicus using PACS. We scanned each subject by eight slices of 1.2-cm intervals between 0 and 9.6 cm above the aortic bifurcation, and the cross section of the abdominal aorta on each slice was divided into 12 sectors. Aortic calcification index (ACI) was calculated by dividing the total number of sectors with calcification in each CT slice by 96. We investigated the impact of abdominal aortic calcification and VFA on LUTS and clinical parameters in patients with BPH

Results

Mean age was 63.2 ± 7.3 years. ACI was significantly correlated with age ($r=0.482$; $p=0.013$), and an urgency score of IPSS ($r=0.403$; $p=0.041$). However, ACI did not correlate with IPSS. VFA was significantly correlated with PSA ($r=0.420$; $p=0.037$), incomplete voiding score of IPSS ($r=-0.427$; $p=0.030$), and nocturia score of IPSS ($r=-0.483$; $p=0.012$).

Concluding message

ACI correlated with an urgency score of IPSS. VFA correlated with incomplete voiding and nocturia score of IPSS. Abdominal aortic calcification and visceral fat obesity seem to affect LUTS in patients with BPH. However, this study's population was small, further studies with more patients was required.

Disclosures

Funding: no **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics not Req'd:** retrospective study **Helsinki:** Yes **Informed Consent:** Yes