The correlation between Local Atherosclerosis of the Prostatic Arteries and Chronic Inflammation in Human Benign Prostatic Enlargement

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III. Patients and methods

The definition of local arteriosclerosis in the prostatic arteries

Removal of the prostatic artery

Elastica-Masson staining

Arteriosclerosis(−)

Arteriosclerosis(+)

Arteriosclerosis was defined when atheroma occupied more than 50% of the inner cavity in the prostatic artery.

IV. Results

Exam. 1. The association between local arteriosclerosis and chronic inflammation

Prostate size was more and prostatic inflammation score were higher in the arteriosclerosis group.

Exam. 2. The association between the LOX-1 expression and the generation of BPE

The expression of these markers were compared according to the presence or absence of local arteriosclerosis by immunohistochemistry.

V. Conclusions

LOX-1 is up-regulated by local arteriosclerosis.

Pathway 1

In the chronic inflammation pathway, migration and accumulation of macrophage has occurred, leading the induction of chronic inflammation. As a result, tissue damage and remodeling has occurred in the prostate, leading to the BPE.

Pathway 2

In the stromal increase pathway, TGF-β1 and NADPH oxidase were activated, leading the activation of oxidation-reduction signal. As a result, stromal increase in the prostate has occurred, leading to the BPE.