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CHANGES OF A1-ADRENOCEPTOR SUBTYPES MRNA AMOUNT IN HUMAN BENIGN PROSTATIC HYPERPLASIA CONCOMITANT WITH HYPERTENSION

Hypothesis / aims of study
To investigate the changes of α1-adrenoceptor subtypes mRNA amount in human benign prostatic hyperplasia (BPH) concomitant with hypertension.

Study design, materials and methods
47 fresh specimens of BPH tissue were obtained by transurethral resection and divided 2 groups, simple BPH group contained 23 cases while BPH with hypertension group has 24 cases. The diagnosis of hypertension was according to clinical criteria and the blood pressure was controlled well. RT-PCR was used to determine the amount of α1A, α1B, α1D adrenoceptor subtypes mRNA in each BPH tissue specimen.

Results
In all 47 specimens, the mRNA amounts of α1A, α1B, α1D adrenoceptor subtypes were 0.95±0.22, 0.97±0.16, 1.00±0.28(P>0.05) and the ratio of them was 32.4% : 33.1% : 34.5%, respectively. Between simple BPH group and BPH with hypertension group, the amounts of 3 subtypes mRNA were changed. In BPH with hypertension group, the amounts of 3 subtypes mRNA were 1.06±0.16, 0.95±0.14, 0.84±0.17(P<0.05) and the ratio was 37.1% : 33.4% : 29.5%. The amount of α1A subtype mRNA was dominant and higher than simple BPH group(P<0.05). In simple BPH group, the amounts of 3 subtypes mRNA were 0.83±0.22, 0.98±0.18, 1.19±0.27(P<0.05) and the ratio was 27.7% : 32.7% : 39.4%. The amount of α1D subtype mRNA was dominant and higher than BPH with hypertension group(P<0.05).

Interpretation of results
The mRNA amounts of α1A, α1B, α1D adrenoceptor subtypes were not different in BPH. However, the amount of α1A subtype mRNA was dominant in BPH with hypertension group while α1D subtype mRNA was dominant in single BPH group.

Concluding message
Compared to simple BPH group, the amount of α1A -adrenoceptor subtype mRNA in the BPH with hypertension group was significantly increased. Focus on blocking α1A-adrenoceptor subtype function may be more beneficial to the clinical treatment of BPH patients concomitant with hypertension.

References

Disclosures
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