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DIFFERENT EXPRESSION LEVELS OF B-ADRENOCEPTOR SUBTYPES IN HUMAN DETRUSOR FROM BLADDER NECK, BLADDER TRIGONE AND BLADDER BODY

Hypothesis / aims of study
We investigated the expression levels of β-adrenoceptor subtypes in human bladder smooth muscle isolated from bladder neck, bladder trigone and bladder body.

Study design, materials and methods:
We investigated the expression levels of β-adrenoceptor subtypes in human bladder smooth muscle isolated from bladder neck, bladder trigone and bladder body.

Results:
β1-、β2-、β3- adrenoceptor mRNA expressions were detected in human bladder smooth muscles from bladder neck, bladder trigone and bladder body. The expression of β1-adrenoceptor mRNA in the detrusor from bladder neck was significantly higher than those from bladder trigone and bladder body (2.32±0.27,P＜0.01), but there was not significant difference in the expression level of β1-adrenoceptor mRNA in the detrusor from bladder trigone and bladder body (0.95±0.97,P＞0.05). The expression level of β2- and β3-adrenoceptor subtype mRNA in bladder neck the detrusor from was significantly higher than those from bladder body(3.91±0.28vs4.00±0.30,P＜0.01), and the detrusor from bladder body was little higher than that from bladder trigone(1.69±1.40vs1.30±1.36,P＞0.05).

Interpretation of results
The bladder neck is functionally more closely related to the urethra than to the detrusor. The trigone is anatomically located close to the bladder neck.In this respect the distribution of β-AR mRNA may differ between bladder neck and the remainder of the bladder because the smooth muscle of the bladder neck is morphologically and pharmaco-logically different.

Concluding message
The expression level of β- adrenoceptor subtypes mRNA in the detrusor from bladder neck is significantly higher than those from bladder trigone and bladder body.

Disclosures
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