

P202 Effects of Urotensin II on the Proliferation of Pheochromocytoma Cells

Guo-qiang LIU, Zheng-pei ZENG, Dong-mei LIU, An-li TONG
Department of Endocrinology, PUMC Hospital, CAMS&PUMC, Beijing 100730, China

Objective: Urotensin II (UII) is reported to be the most potent vasoconstrictor identified to date. To investigate the effects of UII on the proliferation of rat pheochromocytoma cell line (PC12) and human pheochromocytoma cells primary cultured in vitro. **Methods:** We observed the effects of UII at different concentrations (10^{-10} , 10^{-9} , 10^{-8} , 10^{-7} , 10^{-6} M) on the proliferation of rat PC12 cells with MTT method, and then, PC12 cells were stimulated in the presence of UII at 10^{-7} M, whose effects on the proliferation of PC12 cells was observed at 12, 24, 36, 48, 60, 72 hr. The human pheochromocytoma tissue was digested and freed tumor cells were separated for primary culture. MTT was applied to observe the effects of UII at different concentrations (10^{-10} , 10^{-9} , 10^{-8} , 10^{-7} , 10^{-6} M) on the proliferation of human pheochromocytoma cells. **Results:** UII at different concentrations had no obvious effect on the proliferation of rat PC12 cells. Neither did UII at 10^{-7} M have any effect on the proliferation at different times of culture (12-72 hr). UII (at 10^{-7} and 10^{-6} M) could promote the proliferation of human pheochromocytoma cells in the primary culture in vitro. **Conclusions:** Our study suggests that UII had no effects on the proliferation of PC12 cells, and the results also showed that UII could promote the proliferation of human pheochromocytoma cells in primary culture and it probably plays a role in the pathogenesis of pheochromocytoma.

P203 Ageing and Adrenomedullin in the Male Reproductive System of the Rat

Fai TANG, Yuk-yin LI, Wai-sum O
Departments of Physiology and Anatomy, and The Centre of Heart, Brain, Hormone and Healthy Ageing, Faculty of Medicine, The University of Hong Kong, Hong Kong SAR, China

Objective: To study the age-related changes in the gene expression of adrenomedullin (AM), its receptor (CRLR, calcitonin receptor-like receptor) and its receptor activity modifying proteins (RAMPs) in the rat testis, ventral prostate and seminal vesicle in male S.D. rats aged 3 months (young), 12 months (middle-aged) and 20 months (old). **Methods:** AM levels in the plasma, the testis, the ventral prostate and the seminal vesicles were measured by RIA. PreproAM mRNA levels in the tissues were determined by RT-PCR. **Results:** Plasma AM levels were higher in the middle-aged and old rats than in young rats. Testicular AM concentrations as well as the mRNA levels of preproAM and RAMP1 and RAMP3 increased with age. However, the AM concentrations in both ventral prostate and seminal vesicle decreased with age. In the ventral prostate, the mRNA levels of preproAM and RAMP1 declined with age while in the seminal vesicle, the mRNA levels of preproAM, RAMP2, RAMP3 and CRLR were reduced with age. **Conclusion:** These changes may be related to the decline in serum testosterone levels. It is concluded that ageing has different effects on the levels of AM and its receptors in the testis and the accessory sex glands. AM may regulate the functions of these organs and its relative importance may change during ageing (supported by a CRCG grant from the University of Hong Kong).