Journal of Andrology, Vol 14, Issue 5 310-318, Copyright © 1993 by The American Society of Andrology

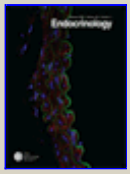
JOURNAL ARTICLE

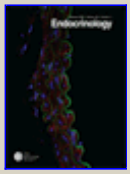
Cell proliferation in the dorsal and lateral lobes of the rat prostate during postnatal development

S. Banerjee, P. P. Banerjee and B. R. Zirkin
Department of Population Dynamics, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, Maryland 21205.

We have shown previously that cell proliferation occurs throughout the ducts of the rat ventral prostate during its postnatal development. Our objectives herein were to identify and quantify proliferating cells in the dorsal and lateral lobes, to quantify DNA synthetic activity in the distal and proximal segments of these lobes, and to compare the results obtained to the results of our previous studies of the ventral lobe. [3H]-Thymidine, administered in vivo, was incorporated into both the distal and proximal segments of day 10-60 rat dorsal and lateral prostates. Quantitative analyses of autoradiographs revealed that the percentages of labeled cells in the distal and proximal segments of the dorsal and lateral lobes were not significantly different at days 45 and 60, and they were only slightly (though significantly) different at days 10 and 20. Biochemical analyses of [3H]-thymidine incorporation similarly revealed no significant differences in the distal and proximal segments at days 45 and 60, and only small differences at days 10 and 20. The results of analyses of mitotic figures were consistent with the results of autoradiographic analyses, showing clearly that cell proliferation occurs throughout the rat dorsal and lateral prostates. These results show for the first time that cell proliferation occurs throughout the dorsal and lateral lobes, strikingly reminiscent of the proliferation pattern that we reported previously for the ventral lobe.

This article has been cited by other articles:





Endocrinology

P. P. Banerjee, S. Banerjee, B. R. Zirkin, and T. R. Brown

Lobe-Specific Telomerase Activity in the Intact Adult Brown Norway Rat Prostate and Its Regional Distribution within the Prostatic Ducts

Endocrinology, February 1, 1998; 139(2): 513 - 519.

[Abstract] [Full Text] [PDF]