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## JOURNAL ARTICLE

# Age-related variation in seminiferous tubules in men. A stereologic evaluation

L. Johnson, C. S. Petty and W. B. Neaves

Tubular boundary tissue and seminiferous epithelia were evaluated stereologically in testes from 28 men aged 20 to 48 years and 28 men aged 50 to 90 years. Testes obtained at autopsy within 15 hours of death were perfused with glutaraldehyde, embedded in Epon (Ladd Research Industries, Inc., Burlington, VT), sectioned at 0.5 micron, and stained with toluidine blue. Volume densities (percentage of the testicular parenchyma) of various parameters determined by point counting and diameter measurements were used to calculate total volumes, length of tubules, and number of cells. Electron microscopy was used to determine the volume density of myoid cells in the boundary tissue. Significant (P less than 0.01) age-related reductions occurred in paired testicular weights, paired parenchymal weights, total volume of seminiferous tubules and of seminiferous epithelium, and length of tubules. The volume density and thickness of boundary tissue increased (P less than 0.01) with age. The volume of boundary tissue per man and the volume density of myoid cells in the boundary tissue did not vary with age. Although the number of myoid cells per man tended to be lower in the older group, the number of myoid cells per cross section of seminiferous tubule was increased (P less than 0.01) in older men. The age-related thickening of the boundary tissue was not due to an increase in boundary tissue but resulted from a reduction in the length of the seminiferous tubules.

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