

Journal of Andrology, Vol 11, Issue 6 539-547, Copyright © 1990 by The American Society of Andrology

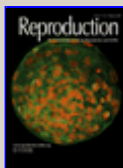
JOURNAL ARTICLE

Experimental cryptorchidism in the adult mouse: I. Qualitative and quantitative light microscopic morphology

S. M. Mendis-Handagama, J. B. Kerr and D. M. de Kretser
Department of Population Dynamics, Johns Hopkins School of Hygiene and Public Health, Baltimore, Maryland 21205.

Morphologic changes in the testes of adult mice after experimentally induced cryptorchidism were studied by light microscopy and stereology. Increasing duration of cryptorchidism resulted in a gradual decrease in the volume of seminiferous tubules per testis, and this was associated with germ cell degeneration. The volumes of Sertoli cell lipid droplets increased, and dilations of the intercellular space between the Sertoli cell junctions was observed in the cryptorchid testis. The luminal volume of the seminiferous tubule was reduced by 50% after 28 days of cryptorchidism. However, the volumes of intertubular tissue and Leydig cells in control and cryptorchid testes were not significantly different. Leydig cell number per testis increased, and the average volume of a Leydig cell decreased gradually with the progression of the cryptorchid state. The volume of the connective tissue cells in the intertubular area increased, but no significant volume change was observed in the volume of intertubular macrophages. After 28 days, the cryptorchid testis contained a significantly increased volume of blood vessels and a reduced volume of lymphatic space per testis. These observations clearly demonstrate that, although the mouse is a species closely related to the rat, the morphologic changes that occur in the Leydig cell population after induction of experimental cryptorchidism in this species is different.

This article has been cited by other articles:



Reproduction

[HOME](#)

P J O'Shaughnessy, L Hu, and P J Baker

Effect of germ cell depletion on levels of specific mRNA transcripts in mouse Sertoli cells and Leydig cells

Reproduction, June 1, 2008; 135(6): 839 - 850.

[\[Abstract\]](#) [\[Full Text\]](#) [\[PDF\]](#)

This Article

- ▶ [Full Text \(PDF\)](#)
- ▶ [Alert me when this article is cited](#)
- ▶ [Alert me if a correction is posted](#)

Services

- ▶ [Similar articles in this journal](#)
- ▶ [Similar articles in PubMed](#)
- ▶ [Alert me to new issues of the journal](#)
- ▶ [Download to citation manager](#)

Citing Articles

- ▶ [Citing Articles via HighWire](#)
- ▶ [Citing Articles via Google Scholar](#)

Google Scholar

- ▶ [Articles by Mendis-Handagama, S. M.](#)
- ▶ [Articles by de Kretser, D. M.](#)
- ▶ [Search for Related Content](#)

PubMed

- ▶ [PubMed Citation](#)
- ▶ [Articles by Mendis-Handagama, S. M.](#)
- ▶ [Articles by de Kretser, D. M.](#)



BIOLOGY of REPRODUCTION

▶ HOME

W.-Y. Lui, D. Mruk, W. M Lee, and C. Y. Cheng
Sertoli Cell Tight Junction Dynamics: Their Regulation During
Spermatogenesis

Biol Reprod, April 1, 2003; 68(4): 1087 - 1097.

[\[Abstract\]](#) [\[Full Text\]](#) [\[PDF\]](#)



BIOLOGY of REPRODUCTION

▶ HOME

I.-s. Kim, H.B. Siril Ariyaratne, and S.M.L. C. Mendis-Handagama
Changes in the Testis Interstitium of Brown Norway Rats with Aging
and Effects of Luteinizing and Thyroid Hormones on the Aged Testes
in Enhancing the Steroidogenic Potential

Biol Reprod, May 1, 2002; 66(5): 1359 - 1366.

[\[Abstract\]](#) [\[Full Text\]](#) [\[PDF\]](#)



MOLECULAR ENDOCRINOLOGY

▶ HOME

F.-P. Zhang, M. Poutanen, J. Wilbertz, and I. Huhtaniemi
Normal Prenatal but Arrested Postnatal Sexual Development of
Luteinizing Hormone Receptor Knockout (LuRKO) Mice

Mol. Endocrinol., January 1, 2001; 15(1): 172 - 183.

[\[Abstract\]](#) [\[Full Text\]](#)



BIOLOGY of REPRODUCTION

▶ HOME

A. Meinhardt, M. Bacher, C. Metz, R. Bucala, N. Wreford, H. Lan, R. Atkins,
and M. Hedger

Local Regulation of Macrophage Subsets in the Adult Rat Testis:
Examination of the Roles of the Seminiferous Tubules, Testosterone,
and Macrophage-Migration Inhibitory Factor

Biol Reprod, August 1, 1998; 59(2): 371 - 378.

[\[Abstract\]](#) [\[Full Text\]](#)

[HOME](#) [HELP](#) [FEEDBACK](#) [SUBSCRIPTIONS](#) [ARCHIVE](#) [SEARCH](#) [TABLE OF CONTENTS](#)

Copyright © 1990 by The American Society of Andrology.