

Hypothalamo-pituitary-gonadal axis of aged female rats : a functional and morphological study

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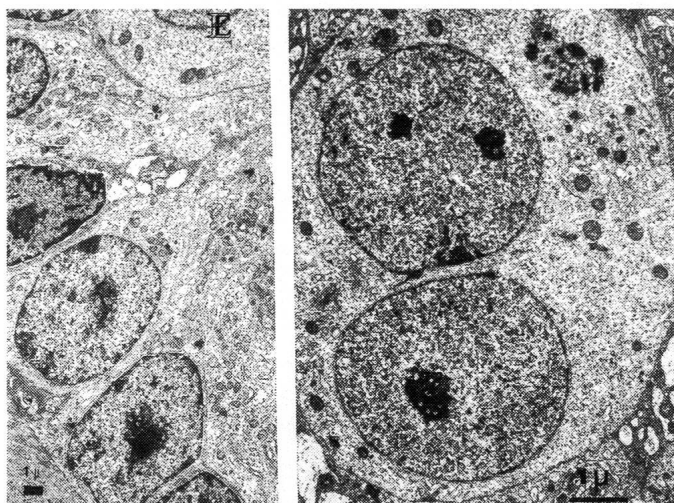
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Fig. 1. Group I: Seminiferous duct with immature spermatids.
Fig. 2. Group II: Immature binucleated spermatidy with poor developed Golgi complex; fragmented chromatoid body.



The anomalies found in the cytoplasmic organellae prevented spermatozoal development. We want to emphasize the fact that fragmentations in the chromatoid bodies prevented the formation of flagellae.

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HYPOTHALAMO-PITUITARY-GONADAL AXIS OF AGED FEMALE RATS. A FUNCTIONAL AND MORPHOLOGICAL STUDY

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Median eminence (ME) and mediobasal hypothalamus (MBH) LHRH and plasma FSH, LH, and progesterone were measured by RIA in young diestrus (age 3 months) and old recurrently pseudo-pregnant (RPP; age 23–24 months) female Long-Evans rats. Lateral ME (LME) LHRH as well as pituitary FSH and LH contents were also evaluated by morphometry and densitometrical immunocytochemistry. Further, by light microscopy we classified and counted the number of ovarian follicles and corpora lutea.

By RIA hypothalamic LHRH, plasma LH and progesterone were similar in the two groups while plasma FSH was higher in old than in young animals.

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NATURAL ACANTHAMOEBA INFECTION IN GREYHOUND DOGS

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Naturally occurring epizootics of acanthamoebiasis were diagnosed on six greyhound farms from Northern Florida and Southern Georgia. Three of the outbreaks occurred in the summer and fall of 1985 and 3 more happened in the summer of 1988. The dogs affected ranged in age from 8 weeks to 13 months, with clustering in the 5 to 7 month range. Clinical signs included oculonasal discharge, anorexia, lethargy, coughing, dyspnea, hemoptysis and neurologic disturbances.

Although further evidence may be required, we believe that undifferentiated spermatids are a sign of tumour development of the seminiferous epithelium due to extended treatment with anabolic hormones.

Table 1.

	lots	animals	sacrifice age	inoculated time
experimental group	I	6	75 days	30 days
	II	6	105 days	60 days
control group	I	6	75 days	
	II	6	105 days	

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The number of LHRH-labeled axons was reduced in the LME of old rats. Further, the pattern of pixel distribution into classes of increasing gray levels was different in the two groups. The number of nucleated FSH-labeled cells and the total FSH area and immunoreactivity were almost twice in old compared with young animals. The measurements of LH-labeled cells were not different in the two groups. In old rats the number of ovarian follicles and corpora lutea was reduced and that of atretic follicles increased.

In conclusion, our data indicate that decreased LME LHRH associated with increased FSH-gonadotropes and plasma FSH occur in old RPP rats. These changes may contribute to explain the complex hormonal disarrangement responsible for the decline of reproductive functions in old female rats.

Cadavers and tissues from 14 cases were examined. Gross necropsy findings included acute, multifocal, nectrotizing pneumonia, and/or multifocal, hemorrhagic meningoencephalitis. Microscopically, a necrohemorrhagic pneumonia with an interstitial pattern and numerous protozoal organisms resembling amebic trophozoites were diagnosed. Brain lesions were multifocal granulomas with vasculitis and necrosis. Amebic organisms similar to these in the lung were present within the necrotic cerebral foci. Lesions in other tissues were