

Short Communication

MONORCHIDISM IN A MONGREL DOG - A CASE REPORT

The descent of testes into the scrotal sac is complete at birth in farm animals. In dogs the testis becomes scrotal in the first week of life (Arthur, 1975), but in some it may not descend till near puberty (Ashdown, 1963). Retained testes are liable to undergo malignant changes (Anderson, 1985; Arthur 1975; McEntee *et al.*, 1969; Robbins *et al.*, 1989; Walter, 1987).

The retained testis in a monorchid dog was studied microscopically and the findings are reported in this paper.

Case history, Gross observations and Treatment

A two year old mongrel with one scrotal testis was presented and on palpation the left testis was seen lodged in the inguinal canal. Based on clinical findings, the case was diagnosed as monorchidism.

The retained testis was removed adopting standard surgical procedures with aseptic precautions. Post operative care with antibiotics was advocated and complete healing was noticed in seven days.

Macroscopically, the testis was firm in consistency, small in size and weighed 3gm. It was preserved in 10 percent formol saline for histological examination.

Microscopical examination of the testis revealed thick, highly vascular, loosely arranged connective tissue fibres forming tunica albugenia.

The trabeculae were highly vascular. The seminiferous tubules were narrow and compactly packed, the basement membrane of which was

distinct and thick. Most of the seminiferous tubules were lined by unusually tall bizarre columnar Sertoli cells showing neoplastic changes, with numerous cytoplasmic processes extending in all directions, (Fig. 1) abnormally large and vesicular nuclei and more than single nucleoli confined to the basal half. A few Sertoli cells were hyperplastic obliterating the lumen. Spermatogenesis was virtually absent with a few spermatogonia confined to the basement membrane. These spermatogonia were large, polyhedral with hyperchromatic cytoplasm. Giant cells were also seen. Another distinguishing feature of the seminiferous tubules were capillaries forming sheath around the basement membrane.

The Interstitial cells of Leydig appeared as dense mass of large cells with hyperchromatic cytoplasm and nucleus showing higher mitotic index associated with proliferating capillaries (Fig. 2). Epididymis was poorly developed with abundance of connective tissue (Fig. 3).

The seat of cryptorchid testis may be ectopic (Ashdown, 1963), and in this study the same was in inguinal canal. Morphometry is in accordance with Anderson (1985).

The cryptorchid testis showed malignant changes as observed by Anderson (1985); Arthur (1975); McEntee and *et al.* (1969) and Walter (1987). Brodey and Reif (1969) and Reif and Brodey (1969) opined that there existed significant relationship between cryptorchidism and incidence of testicular neoplasia.

The absence of spermatogenesis in the retained testis may be due to higher temperature of the inguinal canal than that of scrotum and pressure from adjacent structures.



Fig.1 Seminiferous tubule: Sertoli cell with extensive cytoplasmic process (S), giant cell (G) and a few hyperchromatic spermatogonia (Sp).

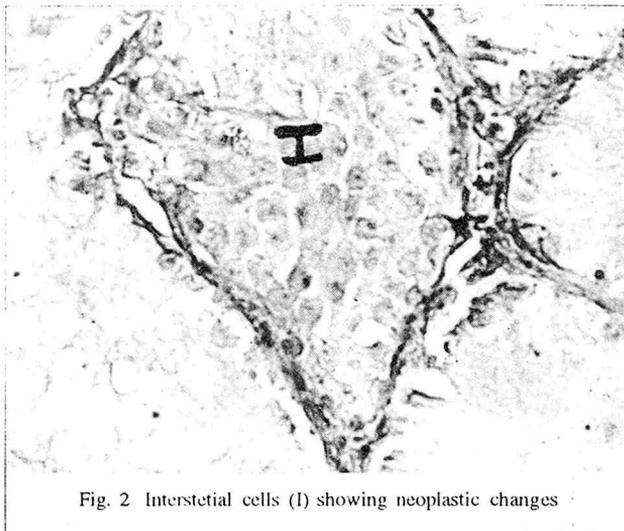


Fig. 2 Interstitial cells (I) showing neoplastic changes

The histological study revealed that it was a mixed tumor, viz, seminoma, Sertoli cell tumor and Interstitial cell tumor.

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Fig.3 Epididymis : Abundance of connective tissue, lumen (L) devoid of spermatozoa

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