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POSTNATAL HISTOCHEMISTRY OF CORPUS EPIDIDYMIS IN ASSAM GOAT (*Capra hircus*)

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ABSTRACT

The corpus epididymis is the principal site of sperm cell maturation. There are important histochemical changes in the corpus epididymis with the advance in age from birth to adolescence. The postnatal histochemistry of corpus epididymis has been sparsely studied in goats, and no study has been conducted in Assam goat (*Capra hircus*). The present study aimed to evaluate age related changes in the histochemistry of corpus epididymis pertaining to glycogen, acid mucopolysaccharides, nucleic acids, and basic proteins in Assam goat (*Capra hircus*), an early maturing dwarf goat breed of Eastern India. The study was conducted on eighteen male Assam goats ranging from day-old kids to 10 months old hoggets, divided into six age groups viz. group-I (0-day), group-II (2 months), group-III (4 months), group-IV (6 months), group-V (8 months), and group-VI (10 months) consisting of three animals in each group. The tissue pieces collected from the corpus epididymis were suitably stained for detection of the histochemicals. The results indicated that basement membrane of the tubules was the main source of glycogen. The McManus periodic acid-schiff (PAS) reaction was mild at birth (+), but moderate (++) from second month onwards. Tubular epithelium was the most important source of acid mucopolysachharide. The Alcian Blue (P^H 1.0) reaction was mild (+) up to 4 months and moderate (++) thereafter. The Fuelgen reaction used to detect the nucleic acid concentration of luminal contents (sperm cells) was negative (-) up to 4 months, moderate (++) at 6 months, and strong (+++) thereafter. Tubular epithelium was the main source of basic protein. The Mercuric Bromophenol Blue reaction was mild (+) at birth, moderate (++) up to 6 months, and strong (+++) there after. The results indicated that the intensity of secretion of different histochemicals varied according to the type of the cell and the age of the animal. The production of the histochemicals starts at the neonatal stage, and intensifies during adolescence.

KEY WORDS

Assam goat, Corpus epididymis, Histochemicals, Post-natal

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