

Studies on the incidence of Reproductive Abnormalities in Local non-descript Female Goats*

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ABSTRACT

An abattoir study was done on the local non-descript female goat genitalia to study the incidence of various forms of gynaecopathological conditions and the same was worked out to be 10.86 percent. The detailed incidence of various types of gynaeco-pathological conditions are as follows: Hypoplasia of ovary (0.03 per cent); Abnormal shape of ovary (0.03 per cent); double external os of cervix (0.10 per cent); Bent cervix (1.70 per cent); uterus unicornis (0.03 per cent); Parovarian cysts (2.22 per cent); ovarian cysts (0.27 per cent); ovaro-bursal adhesions (0.31 per cent); salpingitis (0.51 per cent); Hydrosalpinx (0.20 per cent); Endometritis (3.21 per cent); Hydrometra (0.06 per cent); Melanin pigmentation (0.06 per cent); False extra-uterine pregnancy (0.03 per cent); Foetal mummification (0.06 per cent); foetal maceration (0.03 per cent); Foetal anasarca (0.03 per cent); Ankylosed muscle contracture monster (0.3 per cent) and Hydrocephalus (0.03 per cent).

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The information on the incidence of reproductive abnormalities in local non-descript female goats is lacking. Hence a systematic study was undertaken to probe into this aspect as this information will be quite helpful to the field veterinarians in the process of diagnosis, treatment and prevention of different reproductive disorders in goats.

MATERIALS AND METHODS

A total number of 2928 genitalia were collected from local nondescript does slaughtered at an abattoir of Hyderabad, Andhra Pradesh. All these animals were adult, healthy and non-pregnant belonging to an age group of about 3 years. The average body weight of does was about 20 kgs. The genitalia were carefully examined for the presence of any gross morphological or pathological abnormalities. Each tract was opened by cutting through the cervix, uterine body and into each of the uterine horns. The patency of the Fallopian tubes was tested by flushing them with water containing Nigrosin to aid visibility. The presence of ovarian follicles, follicular cysts (1 cm or larger) and corpora lutea or corpora albicans was recorded.

RESULTS AND DISCUSSION

Three hundred and twenty female goat genitalia were found to be on macroscopic examination as gynaeco-pathological disorders. The incidence of gynaeco-pathological conditions in local non-descript does worked out to be 10.86 per cent. Almost similar findings was reported by Kadu and Kaikini (1987) who have recorded an incidence of 11.54 per cent. This incidence was higher than

* Forms part of the M.V.Sc., thesis submitted by the senior author to the Andhra Pradesh Agricultural University.

the earlier reports (Lyngset, 1968; Sharma, 1973 and Gopal Yadgirkar *et al.*, 1976). The difference in the incidence might be due to a few number of animals examined or variation among breeds studied by these workers.

(A) Anatomical or Structural abnormalities:

Parovarian cysts were the most commonly found anatomical abnormality observed in 65 cases. Sharma (1973) recorded Parovarian cysts in 16 out of 1625 goat genitalia and 33 out of 1700 genitalia by Gopal Yadgirkar *et al.*, (1976) during their abattoir studies in Andhra Pradesh.

One case of ovarian hypoplasia was recorded in this study. Abeyratne and Atureliya (1982) reported two case of ovarian hypoplasia out of a study on 502 reproductive tracts. Whereas, 21 cases of hypoplastic ovaries were identified by Sattar and Khan (1988) in goats.

One case of abnormal shape of ovary (cleft ovary) could be identified in this study. Reports on similar type of incidence in caprines are not available in the literature and the same might be due to an arrest in the development of the ovaries.

Three cases of double external os of the cervix were observed and this type in goats seem to be rare in occurrence (Emady *et al.*, (1975).

A total of 49 cases of bent or kinky cervix was recorded in this study. No reports of this condition in goats are available in literature.

A rare case of uterus unicornis was recorded in this study. Only right horn was present and the left horn was represented by a thin cord like structure and the rest

of the reproductive tract was found to be normal.

(B) Pathological conditions

i) Affections of the ovary

Eight cases of ovarian cysts were recorded in this study. Incidence of ovarian cysts in goats were reported by Nair and Raja (1972) Sharma (1973) Moreira *et al.*, (1993). The difference in the reports of incidence might be due to the studies on different breeds of caprines.

Ovaro-bursal adhesions were recorded in nine specimens of genitalia, Almost similar incidence was recorded by Nair and Raja (1972). The reasons for the occurrence of this conditions in sheep and goats are not clear.

ii) Affections of the oviduct

Salpingitis was observed in 15 genital specimens. An higher incidence of this condition was recorded by Sattar *et al.*, (1988). Many cases of salpingitis are secondary to an ascending infection from the uterus following abortion, retained placenta, septic metritis and Pyometra (Roberts, 1971).

Six cases of hydrosalpinx were found in this study. In general, the incidence of hydrosalpinx was found to be low in sheep and goats.

iii) Affections of the uterus

A total number of 94 cases of endometritis were found in this study. Kadu and Kaikini (1988) reported seven such cases among 1057 genitalia studied by them.

Forty seven cases of metritis were identified in this study. Almost similar percentage of incidence was reported by Kadu and Kaikini (1988). Metritis in does

may follow certain conditions like dystocia, maceration of foetus or retention of foetal membranes (Smith, 1980).

Nine cases of Pyometra were observed in this investigation. Sharma (1973) recorded one such case in his study on 1625 goat genitalia. While, four cases of Pyometra recorded out of 1057 genitalia by Kadu and Kaikini (1988)

Two genital specimens were found to have hydrometra. Nair and Raja (1972) could detect 3 such cases out of

1860 goat genitalia examined by them. Whereas, Hasselink (1993) recorded a very high incidence of hydrometra in goats ranging between 3.0 to 20.8 per cent. No confirmed association with cystic follicles, foetal remnants or membranes or cervical obstruction was reported (Smith, 1980).

Deposition of melanin pigmentation in the uterus was found to be present in this study in two genital specimens. Few authors have reported its incidence to be higher (Gopal Yadgirkar *et al.*, 1976 Abeyratne and Atureliya, 1982).

REFERENCES

- Abeyratne, A S and Atureliya O S 1982 Study on the reproductive organs in the indigenous female goats of Sri Lanka. *Ceylon Veterinary Journal* 27: 17-19.
- Enady M, Noakes D E and Arthur G H 1975 Analysis of reproductive function of the ewe based on post-mortem examination. *The Veterinary Record* 96: 261-266.8 Gopal Yadgirkar, Sri Raman P.K. Suryanarayana Murthy A and Sastry G A 1976 Studies on the patho-anatomical conditions of female genitalia in goats. *Journal of Research, APAU III (1 & 2): 4-6.*
- Gopal Yadgirkar, Suryanarayana Murthy A, Sriraman P K and Ganti A. Sastry 1976. Note on pigmentation in female genitalia of sheep and goats. *Journal of Research, APAU III (3&4): 129-130.*
- Hasselink J W 1993 Incidence of Hydrometra in dairy goats. *The Veterinary Record* 132: 110-112.
- Kadu M S and Kaikini A S 1988 Pathological conditions in the female genital organs of the goat *Indian Journal of Animal Science*. 58: 795-798.
- Lyngset O 1968 b Studies on reproduction in the goat iv The functional activity of the uterine horns of the goat V. Pathological conditions and malformations of the genital organs of the goat. *Acta Veterinaria Scandinavia* 9: 308-315, 365-375.
- Moreira E L T, Nasemento E F D and Chquiloff M A G 1993 Morphological alterations in the ovaries and uterus of capra hircus L.(I) Regressive alterations. *Veterinary Bulletin*, 4072.
- Nair K P and Raja C K S V 1972 Investigations on the pathological conditions in the female genital organs of the goat. *Kerala Journal of Veterinary Science* 3: 106.
- Roberts S J 1971 Infertility in the cow In *Veterinary Gynaecology and Genital Diseases* 2nd Edn. Scientific book agency, Calcutta 376-511.
- Sattar A and Khan M Z 1988 Incidence and pathology of ovarian disease of goats. *Pakistan Veterinary Journal* 8: 18-21.
- Sattar A Khan M Z and Siddiqui M 1988 Incidence, Pathology and Bacteriology of abnormalities of fallopian tubes in goats. *Pakistan Veterinary Journal* 8: 14-17.
- Sharma S K 1973 Pathological conditions of reproductive system of sheep and goat in Andhra Pradesh. M.Sc., (Vet.) Thesis submitted to Andhra Pradesh Agricultural University, Hyderabad.
- Smith M C 1980 Caprine reproduction In *Current therapy in Theriogenology*, W B Saunders, Philadelphia pp 971-989.