REPRODUCTIVE DISORDERS IN DECCANI EWES: AN ABATTOIR STUDY *

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ABSTRACT

An abattoir survey of 3004 genital tracts of Deccani breed ewes revealed gravid (1.06 per cent) and abnormal genital tracts (6.52 per cent). The incidences of anatomical and pathological abnormalities were 2.94 and 3.4 per cent, respectively. Among the percentage of anatomical abnormalities, Parovarian cyst (1.89), kinked cervix (0.99) and hypoplasia of ovaries (0.06) were noticed. The incidence of pathological abnormalities (per cent) were ovarian cysts (0.12), ovaro bursal adhesions (0.49), ovulation tags (0.13), endometritis (0.76), pyometra (0.49), melanin pigmentation (0.66), hydrometra (0.03), mummification (0.06) and maceration (0.03).

Key words: Abattoir study, Deccani Ewes, Reproductive disorders

The economic importance of sheep has been recognized by the farmers and contributes much to the economy of our country being source of mutton, wool, skin and other by-products. Deccani and Nellore are two major sheep breeds of Andhra Pradesh. A comprehensive breeding programme is quite necessary and such an endeavor calls for an integrated approach in understanding various reproductive abnormalities of sheep. Hence, the present study was under taken to find out the type and incidence of various gynaeco-pathological conditions in Deccani ewes.

A total of 3004 genitalia of Deccani ewes collected from municipal abattoir of Hyderabad, Andhra Pradesh and the average body weight of ewes was 20-25 Kgs. The genitalia were carefully examined for the presence of any gross morphological abnormalities. Each tract was opened by cutting through cervix, uterine body and into each uterine horn. Detailed vaginal examination was also conducted. Abnormalities such as hydrometra, pyometra, melanin pigmentation, endometritis, ovaro – bursal adhesions, ovarian cysts etc. were taken in to the laboratory for further observations including measurements of the size of the uterus, nature and volume of its fluid contents. Certain specimens such as ovarian hypoplasia, endometritis and pyometra were selected for histopathological examination for confirmation of the diagnosis.

A total of 196 (6.52 per cent) abnormal genital tracts out of 3004 were recognized on macroscopic examinations which is in agreement with the studies of Biolatti *et al.* (1984) in Piedmont breed sheep, whereas higher (307) number of abnormal genital tracts were identified by Yadgirkar *et al.* (1974) in Nellore sheep, Al-Dahash *et al.* (1993) in Iraqi ewes and Wang *et al.* (1999) in Haryang sheep. But, lower incidence of 1.41 per cent was recorded by Emady (1976) in Iranian sheep. The variation in the incidence of abnormal genital tracts are attributed to breed specific, reproductive diseases prevailing in the study area, management and rate of inherent defects in ewes.

The incidence of anatomical abnormalities were 2.96 per cent in Deccani ewes which was in line with Smith *et al.* (1995). But, lower incidence (0.30 per cent) of anatomical abnormalities was recorded by Emady (1976). Among the anatomical defects, the commonest defect was parovarian cyst (1.96 per cent) which is supporting the findings of Gustafson and Holamberg (1966). But, higher incidence (26.6 to 39.7 per cent)

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and the lower incidence (0.25 per cent) were recorded by Smith *et al.* (1995) and Sharma (1973), respectively. These cysts were considered to be vestiges of mesonephric duct (Roberts, 1971) and unless and until, the cysts impinge the lumen of oviduct, these cysts may not cause infertility. A total of 30 cases (0.99 per cent) of "kinked cervix" were recorded. Contradicting the present investigation, very low incidence ranging from 0.05 to 0.45 per cent reported by several authors (Emady, 1975; Al-Dahash *et al.*, 1993). The kinked cervices were believed to cause certain degree of infertility by interfering with the sperm transport within the cervix. Two cases of bilateral ovarian hypoplasia (0.06 per cent) were recorded in this study; similar cases of hypoplasia were also reported by Smith *et al.* (1999) which might be due to recessive autosomal genes.

A total of 104 genital tracts (3.46 per cent) were found to have pathological abnormalities. Similar findings were also observed by Ramachandran *et al.* (1984). However, a lower incidence (1.60 per cent) was recorded by Nair and Raja (1972) and higher incidence (6.57 to 44.0 per cent) was reported by Smith *et al.* (1998). Two cases of shiny and thin walled follicular cysts (0.06 per cent) were recorded. A higher incidence of 6.0 per cent was recorded by Dzhurova *et al.* (1985) and a lower incidence of 0.82 per cent was reported by Kran *et al.* (1995). Two cases of thick walled luteal cysts were observed in the present study. But, higher incidence of luteal cyst was reported by many authors (Kran *et al.*, 1995). The discrepancy in the reports of incidence of luteal cysts might be due to studies conducted on different breeds of sheep, level of heritability and grazing on oestrogenic cloves and legumes (Baxendell, 1985).

Ovaro-bursal adhesions were observed in 0.49 per cent cases. A higher incidence rates than the present study was also reported by Yadgirkar *et al.* (1974), Winter and Dobson (1992) and Al-Dahash *et al.* (1993). Ovaro-bursal adhesions were aroused like strands from scars of old corpora lutea which might be due hemorrhages at the time of ovulation or puerperal infections (Arthur *et al.*, 1989). A total of 23 cases of endometritis were found, which is in agreement with the findings of Adams (1975). However, a higher incidence of endometritis in ewes, ranging from 2.94 to 44.0 per cent was recorded by Wang *et al.* (1999). Sixteen cases of pyometra were identified in this study. Almost similar incidence rate was reported by Nair and Raja (1972), Adams (1975), and Al- Dahash *et al.* (1993). A single specimen of hydrometra (0.03 per cent) was recorded. Winter and Dobson (1992) observed the incidence of hydrometra to the extent of 4.13 per cent in ewes.

Deposition of melanin pigmentation in uterus was observed in 20 genital tracts (0.66 per cent). Similarly, Emady *et al.* (1975) and Kran *et al.* (1995) could identify its incidence ranging from 0.2 and 0.7 per cent respectively in ewes. The melanosis which was reported in this study, had no relationship with genital tract pathology (Smith et al., 1999). A single case of fatty encapsulation of ovary was reported with an incidence of 0.03 per cent. Similar condition (0.11 per cent) was also recorded by Yadgirkar *et al.* (1974) in ewes which may interfere with ovulation. A total of 18 genital tracts (0.60 per cent) were noticed to have cysts of cysticercus teneuicolis attached to the vaginal wall. Similar types of cysts were also described by Smith *et al.* (1999) with an overall incidence of 0.60 per cent. These cysts may not interfere with fertility as they were restricted to vagina.

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