INCIDENCE OF GROSS GENITAL ABNORMALITIES AND TUBAL IMPATANCIES IN CULLED BUFFALOES *(BUBALUS BUBALIS)**

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ABSTRACT

Genital organs of freshly slaughtered buffaloes were examined and out of 131 organs examined, 4 (3.05%) had early pregnancy. 127 non-gravid organs (96.95%) comprised 29 (22.14%) normal and 98 (74.81%) having gross abnormalities. The affections were found to be the maximum in cervix (51.91%) followed by uterus (29.01%), ovary with bursa (20.61%), fallopian tube (13.74%), vagina (4.58%) and under developed genitalia (3.05%). Among the affections of ovaries and mesovarium, the para-ovarian cysts were found maximum in 13.74 per cent specimens followed by ovaro-bursal adhesions (9.16%), luteal cyst (1.53%), follicular cyst (0.76%) and ovarian haematoma (0.76%). Using air insufflations technique, unilateral tubal impatency was found in 8.40 per cent tracts, whereas bilateral impatency in 4.58 per cent genitalia. The rate of tubal blockage at the uterotubal junction, isthmus and ampulla were found to be 69.57, 21.74 and 8.70 per cent, respectively. The uterine disorders comprised of perimetritis (20.60%), endometritis (19.85%), perimetrial cyst (3.05%) and leomyoma (0.76%). The cervical disorders comprised of kinked cervix in 41.98 per cent cases and prolapsed cervical rings in 8.40 per cent buffaloes.

Key words: Genital tract, Abnormalities, Buffalo

Normalcy of female reproductive tract is essential for fruitful conception and full term carriage. The present study was undertaken with a view to investigate the accountability of genital abnormalities in the culled buffaloes.

A total of 131 genital organs of freshly slaughtered buffaloes were collected from local slaughter house. The gross structural abnormalities of congenital or acquired form and unilateral or bilateral involvement were recorded following macroscopic examinations of the dissected organs. Fallopian tubes were tested for their patency, by air insufflations using the instrument designed by Kavani *et al.* (1982) comprising of sphygmomanometer, Foley's catheter, three way valve, rubber tubes and rubber blower. Interpretation was done based on the time taken for the drop in pressure from 180 mm Hg to 20 mm Hg. Time up to 25 seconds, 25 to 60 seconds and 60 to 120 seconds was considered as patent, partially patent and occluded oviducts, respectively.

Out of 131 reproductive organs examined, 3.05 per cent organs were found to have an early pregnancy of 30 to 40 days. As compared to the present findings, comparatively higher incidences of early pregnancies have been reported by Dinc and Guler (1987) and Khasatiya *et al.* (1998) as 25.00 and 6.70 per cent, respectively.

Out of 131 tracts studied, 96.95 per cent organs were found to be non-gravid with 22.14 per cent normal and 74.81 per cent having various gross abnormalities. The total abnormalities were comparatively higher than

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those reported by Saini *et al.* (2008) in buffaloes and Ananda and Srilatha (2008) in buffaloes as 53.70 and 17.88 per cent, respectively. Among the affections, the cervical affections were found to be the maximum as 51.91 per cent followed by uterus, ovary and bursa, fallopian tube, vagina and under developed genitalia as 29.01, 20.61, 13.74, 4.58 and 3.05 per cent, respectively.

The incidence of paraovarian cyst was found to be 13.74 per cent in the present study. The finding is very close to the values reported by Khan *et al.* (1989) and Saini *et al.* (2008) as 9.18 and 7.90 per cent, respectively. Ovaro-bursal adhesions were recorded in 9.16 per cent. The present finding corroborated well to the reports of Ohashi *et al.* (1984) and Grewal (2001) in bovines. The incidence of ovarian cysts was found to be 2.29 per cent with follicular cyst and luteal cyst as 0.76 and 1.53 per cent, respectively. The incidence of ovarian cyst corroborated with Ingole *et al.* (2006) and Saini *et al.* (2008). The ovarian haematoma was found to be 0.76 per cent which was lower than report of Abdulla Khan and Abdul Salam (1967) in buffaloes.

Gross unilateral enlargement of oviducts was found in 7.63 per cent cases which comprised unilateral and bilateral enlargements in 4.58 and 3.05 per cent tubes, respectively. Duchateau and Whitmore (1978) reported total incidence of salpingitis to be 8.40 per cent (bilateral 6.40%; unilateral 2.00%) in cows comparable to present findings. Abdulla Khan and Abdul Salam (1967) also reported 7.92 per cent (bilateral 2.37%; unilateral 5.56%) incidence.

Using air insufflations technique, unilateral tubal impatency was found in 8.40 per cent tracts and bilateral impatency in 4.58 per cent genital tracts. Grewal (2001) reported unilateral impatency in 11.00 per cent (6.00%, right and 5.00%, left) and bilateral impatency in 5.00 per cent, which corroborated with the present findings. The results of the present study are not far off from those of Kavani *et al.* (1982) in buffaloes (4.34%). The most frequent sites of tubal blockage were found to be the uterotubal junction (69.57%) after hydrotubation of excised genitalia, followed by the isthmus (21.74%) and ampulla (8.70%) in the present study. Kavani *et al.* (1982) and Khasatiya *et al.* (1998) also reported similar observations. Grewal (2001) reported partial tubal patency in 7.00 per cent in bovine genitalia, which is comparatively higher than the present findings. The gross lesions in the fallopian tubes were comprised of pyosalpinx and hydrosalpinx in 1.53 per cent cases. The incidence of hydrosalpinx and pyosalpinx was very close to the present findings of Khasatiya *et al.* (1998).

The uterine disorders were found in 29.01 per cent genitalia with perimetritis, endometritis, perimetrial cyst and uterine tumor - leomyoma as 20.60, 19.85, 3.05 and 0.76 per cent, respectively. Khasatiya *et al.* (1998) and Grewal (2001) reported comparatively less incidence of perimetritis. Khan *et al.* (1989), Kavani (1984) and Grewal (2001) found very close incidence of endometritis (15 to 25%) as compared to the present findings. Khasatiya *et al.* (1998) reported comparable incidence of perimetrial cysts to be 2.00 per cent to the present findings.

Incidence of cervical disorders was found to be 51.91 per cent which comprised of kinked cervix, cervical obstructions, cervical cyst and prolapsed cervical rings. Comparatively lower incidence of cervical abnormalities as compared to the present findings has been reported by Khasatiya *et al.* (1998) and Grewal (2001) in buffaloes. Khasatiya *et al.* (1998) reported incidence of cervical ectropion to be 8.82 per cent, which is in agreement with present findings. Vaginal disorders were found to be 4.58 per cent with vaginal bands in 0.76 per cent (n=1) buffaloes.

Two third of culled buffaloes were having either single or multiple gross abnormalities and acquired cervical affections to be the maximum in half of the culled buffaloes which is suggestive of sequelae of multiple cervical insults / injuries while handling the female genitalia at parturition and/or artificial insemination at the field level.

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