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Uterine abnormalities in adult slaughtered buffalo in Hyderabad, Pakistan

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Abstract

The study was conducted to investigate the gross pathological abnormalities of uterus in buffalo slaughtered at Hyderabad slaughter house. Two hundred uteri of adult buffaloes were randomly collected and examined for gross pathological abnormalities. Out of these, 56.5% were abnormal, 26.0% normal, while 17.5% found pregnant; otherwise, they were also normal. The incidence of endometritis found to be the highest amongst all then other abnormalities. The individual gross-pathological lesions observed on the surface of the uterus were: cysts 2%, adhesion 13% and asymmetry of uterine horns 22%, while endometritis 47%, mucometra 9%, hydrometra 4% and pyometra 3%. It was observed that, a large number of buffaloes sent for slaughter were suffering from minor reproductive abnormalities. These were treatable and the animals could have been retained for future breeding. The slaughtering of pregnant buffaloes signifies the importance of reproductive health management program, which is lacking in the area under study.

Keywords: Buffalo, Reproduction, Uterus, Abnormalities, Slaughter House

Introduction

Pakistan is ranked second in the world (13.4%) in buffalo population, because the estimated population of buffalo in the country is 29.9 millions with an annual growth rate of 4.7 percent (GOP, 2009). Pakistani buffaloes comprise Nili Ravi and Kundhi buffalo breeds, which are of dairy type. Buffaloes hold an important position in the economy of Pakistan. The total value of the products from the buffalo has been estimated to be Rs.347.8 billion (Qureshi et al., 2004).

Reproductive performance of buffaloes has remained very poor (Nanda et al., 2003) and is adversely affected by delayed age of puberty, first calving and prolonged calving interval (Wahid, 1975), poor expressions of oestrus signs, postpartum anoestrus and inbreeding (Jainudeen and Wahab, 1987).

Gynecopathological problems in cattle and buffaloes are adversely affecting the reproductive efficiency of the animal. Uterine infections due to non-specific organisms are the dominant cause of infertility. Predisposing factors for the development of these problems are unhygienic breeding and carryover the infection from puerperal period. Hypocalcaemia, dystocia, genital prolapsed and retained foetal membranes are most common causes of uterine infections (Samad and Lodhi, 2004). Amongst various reproductive abnormalities, endometritis, pyometra, hydrometra, salpingitis, cervicitis, vaginitis and cystic follicle are the most common conditions associated with reproductive failure (Morrow, 1980; Iqbal et al., 1991). These are mostly treatable and can be reduced by proper treatment (Hamidullah, 1993). Hyderabad and its surroundings are thickly animal populated areas. The animals brought for sale and slaughter are mostly unproductive, aged, accidentally injured and infertile (Kunbhar, 1992). The survey of slaughterhouse material provides a valuable aid and opportunity to investigate certain abnormalities of the genital tract. The present study was, therefore, designed to investigate uterine abnormalities of the buffalo slaughtered at Hyderabad.

Materials and Methods

This survey was conducted on reproductive tract of buffaloes, to investigate the gross reproductive abnormalities, slaughtered at Hyderabad slaughter house. Two hundred uteri were randomly collected

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during the routine slaughter hours. The organs were placed in the normal saline solution (0.9%), packed in polythene bags, placed in the bucket containing ice and shifted to the laboratory of the Department of Animal Reproduction, Faculty of Animal Husbandry and Veterinary Sciences, Sindh Agriculture University, Tando Jam, Pakistan. The organs were removed from the freezer and placed on surgical table in open air for a while to restore their normal consistency. The abnormalities were recorded according to the procedure of Kikani (1978), Vighio (1980) and Kunbhar (1992). The uteri were examined for external abnormalities and then opened by giving midline dorso-longitudinal incision to record the internal changes like pyometra, hydrometra, mucometra, endometritis, cyst, and pregnancy. The data were calculated in terms of mean and percentage.

Results and Discussion

The examination of female reproductive tract of slaughtered buffaloes revealed that 26% were normal, 56.5% abnormal, while 17.5% were found pregnant, other wise they were also normal (Table1). The animals slaughtered during the present study were weak and emaciated and most of them were aged and suffering form uterine abnormalities. In the present study, gross genital abnormalities of uterus were recorded as 56.5% in buffaloes. These figures are higher than reported (16.80-37.39%) by Hamidullah (1993), Nematullah (2004) and Khan et al. (1987). But the present figures are in agreement with the findings (48 and 53.5%) of Razzaque et al. (2004) and Bhattacharya et al. (1970).

Earlier findings (72.80%) reported by Qureshi and Ahmed (1966) are higher than that observed in the present study. Higher percentage for abnormal conditions indicates the lack of veterinary service, poor management, fluctuation in the climatic conditions and breed differences. Gross pathological abnormalities recorded on the uterine surface were adhesion 28.5%, asymmetry of the uterine horn 22% and cysts on the uterine wall 2% (Table 2). The findings of present study for asymmetry of uterine horn (22%) are higher than the 1.2% reported by Hamidullah (1993). This could be due to the non-specific diseases, congenital defect, incomplete involution of the uterus and breed of the animal. The location of adhesion was found to be 7% on the surface of uterine horn, 2% on body of uterus and 4% on the cervix, (Table 3). The incidence of adhesions (13%) on the uterine surface is higher than the results (1.80%) reported by Hamidullah (1993) in buffaloes. The variation may be due to the climatic condition, manipulation of the organs and also usage of certain hormones such as oxytocin and stilbestrol. Gross pathological abnormalities of uterine lumen were recorded as endometritis 47%, hydrometra 4% and pyometra 3% and mucometra 9% (Table 4). The incidence of endometritis (47%) found during the present study is higher than the findings (up to 34%) of others (Kumar 1988; Selvaraju et al., 2005), whereas the findings of Samad et al. (1984) are higher (56.5%) than the results of present study. The findings for the incidence of hydrometra (4%) recorded in present investigation are in agreement with the results (5.7%) reported by Vighio (1980) in buffaloes, where as the findings (1.2%) of Samad et al. (1987) are lower than the results of present study.

The incidence of mucometra (9%) recorded in the present study is higher than reported by Kumar (1988) and Samad et al. (1987), whereas, the results (45.7%) reported by Vighio (1980) is higher than the findings of present study. The incidence of pyometra (3%) found in the present study is in agreement with the results reported by Hamidullah (1993), whereas, the findings of Kumar (1988) and Vighio (1980) are higher than that observed in present study in buffaloes.

The higher incidence of gross pathological abnormalities of uterus could be due to the mishandling and entry of micro organisms at the time of parturition and insemination or breeding, which may cause infertility problems. Such animals mostly remain unproductive. In the present study the higher percentage (56.5%) of reproductive disorders indicates that the buffaloes sent for slaughter because of reproductive inefficiency. Most of these diseases are curable and the animals could have been saved by proper examination and treating accordingly.

The examination of slaughter house material revealed that 17.5% buffaloes were pregnant (Table 5). These figures are higher than the results reported by Razzaque et al. (2004) and Fathallah et al. (2000). Where as the findings (24%) of Hamidullah (1993) is higher than the results of present study, which indicate the ignorance of slaughtering rules and lack of veterinary service particularly the pregnancy diagnosis in the area.

The right and left horn pregnancy was 57.14 and 42.85% (Table 5) respectively which is in close agreement with the results reported by Rehmatullah et al. (1987), which were 58.3% in right horn and 40% in left horn in buffaloes. In contrast to this, the findings of Hamidullah (1993) were 44.26% in right horn as compared to 47.54% in the left horn. The sex of fetus could not be identified during the present investigation due to the early stages of foetal development. The majority of pregnant animals were found in early stages of pregnancy (1-2 months). If these buffaloes were allowed to complete the gestation period and the farmers could get the chance to retain these animals for future breeding.

Table 1: Prevalence of reproductive disorders in buffalo (N-200)

Status	Number of observation	Percentage
Normal organs	52	26.0
Abnormal organs	113	56.5
Pregnant uteri	35	17.5

Table 2: Gross pathological abnormalities of uterine surface in buffaloes (N-200)

Pathological condition	No. of affected organs observed	Percentage
Cyst	4	2.0
Adhesion	57	28.5
Asymmetry	44	22.0
Total	105	52.5

Table 3: Location of adhesion on uterus in buffaloes (N-200)

Location	Number	Percentage
Adhesion on external Surface of uterine horn	32	16.0
Adhesion on body of uterus	5	2.5
Adhesion on cervix	20	10.0
Total	57	28.5

Table 4: Gross pathological abnormalities of uterine lumen in buffaloes (N-200)

Pathological condition	No. of affected organs observed	Percentage
Endometritis	94	47.0
Pyometra	6	3.0
Hydrometra	8	4.0
Mucometra	18	9.0
Total	126	63.0

Table 5: Pregnancy percentage in slaughtered buffaloes (N-200)

	Number	Percentage
Pregnant organs	35	17.5
Right horn pregnancy	20	57.14
Left horn pregnancy	15	42.85

It is concluded from the present investigation that a large number (56.5%) of buffaloes were suffering from various reproductive disorders, where as a good number of buffaloes (43.5%) were also found normal having no any gross pathological abnormalities. Out of those 17% buffaloes were found pregnant. The reproductive abnormalities were not of serious nature. These were treatable and a large number of buffaloes could have been retained for future breeding. It is suggested that the slaughtering rules and regulation should be followed strictly. Anti-mortem examination should be carried out by professional veterinarians to check and discourage the slaughtering of pregnant animals. The government should utilize the results obtained by the researchers for improvement and welfare of the status of existing livestock.

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