

# Surveillance of reproductive disorders in Marathwada region of Maharashtra

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**Abstract :** The present study was carried out to record incidence of reproductive disorders of buffaloes presented at different locations from Marathwada region of Maharashtra state. The 6 month data of reproductive disorders such as anoestrus, repeat breeding, prolapse of genitalia, retained placenta and metritis was studied. A total of 1513 buffaloes were presented at various Veterinary aid centers selected for this study. Amongst these 167 (11.03%) showed either or mixed reproductive disorders. On screening the data of 167 animals, anoestrus was found to be highly incidental (68.26%) followed by metritis (15.57%), repeat breeding (5.99%), prolapse (5.99%) and retention of placenta (4.19%).

**Key words :** Buffalo, Reproductive disorders

**How to cite this paper :** Kondre, B.M., Kulkarni, G.B. and Gangane, G.R. (2015). Surveillance of reproductive disorders in Marathwada region of Maharashtra. *Vet. Sci. Res. J.*, 6(2) : 85-89.

**Paper History :** Received : 24.04.2015; Revised : 18.08.2015; Accepted : 24.09.2015

## INTRODUCTION

Reproductive failure in domestic animals is one of the most serious problems to dairy industry and hence, effective functioning of reproductive organ is most important. Infertility in livestock has been a major problem in our country. On account of its various functions the genital tract of females is subjected to many disease conditions as compared to any other parts of body. The chances of contracting infection particular at calving and after parturition are immense, leading to reproductive disorders. The breeding efficiency of farm animals is lowered by a variety of reproductive disorders, which in turn causes a serious drain to the farmers. Failure to reproduce may be the consequence of unknown causes inherited or congenital anomalies, nutritional deficits or excesses, traumatic irregularities, intoxication, metabolic disorders, neoplasms or infectious diseases. Rao *et al.* (1971) reported that 32.28 per cent buffaloes had reproductive failure due to non-specific infections. Cattle infertility scheme report 1981-82 stated that 16 per cent infertility problems in cattle were due to endometritis (Derashri *et al.*, 1983).

Large numbers of buffaloes are slaughtered annually. One of the major reasons for culling of these animals is lowered fertility, which causes serious threat and thus, hampers livestock economy of our country (Runnells *et al.*, 1965). Problems of reproduction are encountered more in female buffaloes, which result in wide calving interval and heavy economic losses. Intensive research is, therefore, required to identify and tackle these problems. Therefore, in view of heavy losses due to the reproductive disorders in the buffaloes it was proposed to undertake, a systemic study of the various reproductive disorders in buffaloes with objective to record incidence of reproductive disorders

of buffaloes presented at different locations from Marathwada region of Maharashtra state.

## RESEARCH METHODOLOGY

The study was carried out at MKR Frozen Foods Export Ltd., Nanded and identified locations from Marathwada regions *i.e.* Veterinary Polyclinic, Veterinary College, Parbhani, Veterinary Dispensary, Laakh Tq. Aundha (Nagnath) Dist. Hingoli, Veterinary Polyclinic Degloor, Dist. Nanded, Veterinary Polyclinic, Veterinary College, Udgir, Dist. Latur, Veterinary Dispensary, Nachanwel, Tq. Kannad, Dist. Aurangabad.

The 6 month data of reproductive disorders of buffaloes available at 5 veterinary polyclinic/dispensaries of Marathwada region was analyzed. Incidence of various reproductive disorders such as anoestrus, repeat breeding, prolapse of genitalia, retained placenta and metritis was studied, as well as the incidence of reproductive disorders in buffaloes slaughtered at MKR Frozen Foods Exports Ltd., Nanded was also utilized.

Most of the animals of the study were non-descript and without any breeding history. The exact age of the animals could not be ascertained, however, the animals were between 7 to 15 years of age.

## RESULTS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

### Incidence :

The six month data of reproductive disorders in buffaloes available at 5 veterinary polyclinics of Marathwada region were analyzed.

A total of 1513 buffaloes were presented at various Veterinary aid centers selected for this study. Amongst these 167 (11.03%) showed either or mixed reproductive disorders. On screening the data of 167 animals, anoestrus was found to be highly incidental (68.26%) followed by metritis (15.57%), repeat breeding (5.99), prolapse (5.99%) and retention of placenta (4.19%) (Table 1).

The incidence of gynecological disorders was appear to be more in veterinary dispensary of Hingoli district, whereas, only two cases pertaining to reproductive disorders were presented at Veterinary Polyclinic College of Veterinary and Animal Sciences, Parbhani during study period. The more number of cases of anoestrus at Hingoli district were only due to organization of Animal Health campaign, which means that unidentified and neglected anoestrus cases remains with farmers as non-producers. However, the less submission of cases at Parbhani Veterinary Polyclinic might be due to another Veterinary Dispensary at Parbhani.

At Veterinary polyclinic Udgir, Degloor and Veterinary dispensary Nachanwel, anoestrus was found to be major disorder in addition, metritis was also noted at Veterinary Polyclinic Degloor.

The observations of present study are in close approximation with Pandit and coworkers (Pandit *et al.*, 1982 and Pandit *et al.*, 1991), Atwal *et al.* (2002) and Bharkad and Markandeya (2003). The high number of cases of Anoestrus noted in present study was only due to a involvement of cases presented at animal health camp in one of the district.

The less incidental reproductive disorders as pyometra, uterine torsion and mummification were not seen by author at selected place during the study period.

Similarly, the incidence of reproductive disorders of buffaloes slaughtered at MKR Frozen Foods Pvt. Ltd., Nanded was also studied during study period. A total of 658 adult mature female carcasses were observed and morbid changes in ovaries and uterus if any were recorded. Amongst 658 genitalia 568 (86.32) were having non-gravid uterus with normal gonads reproductive tract, whereas, in 90 (13.68%) cases were having pathological condition either uterus or ovary or in both.

### Ovaries :

The pathological conditions of ovaries were recorded in 38 cases (5.78%). The various pathological conditions

recorded in ovaries were: Ovarian aplasia, Ovarian hypoplasia, Parovarian cysts and Ovarian adhesions. Similar observations were recorded by Rao and Rajya (1976) in their study. However, the higher incidence was recorded by Damodaram (1974), Kulkarni (1974), Ohashi *et al.* (1984) and Khan *et al.* (1989).

#### Ovarian aplasia :

The ovarian aplasia was recorded in only one case (0.15%). In this case the right ovary was completely absent. The literature scanned did not reveal any reference regarding ovarian aplasia. Ganti (1983), Jubb *et al.* (1991) also stated that the incidence of unilateral and bilateral ovarian aplasia is occasionally seen in ruminants.

#### Ovarian hypoplasia :

The ovarian hypoplasia was recorded in 7 cases (1.06%). Among these 3 cases (0.46%) of right ovary were affected whereas, in 4 (0.61%) cases left ovary was affected. The ovaries were small rudimentary and with irregular surface.

Kulkarni (1974) and Ohashi *et al.* (1984) studied the reproductive disorders and noted similar type incidence. However, the low incidence have been recorded by Rao and Rajya (1976) and Ghora *et al.* (1997).

#### Par ovarian cysts :

Ovarian cysts were recorded in 9 cases (1.36%). Among these in 5 cases (0.76) right ovary was appeared to be involved, while in 4 cases (0.61) left ovary. The observations of present study corroborates with the observations of Rao and Rajya (1976). However, a high incidence of parovarian cysts have been recorded by Damodaran (1974), Ohashi *et al.* (1984) and Khan *et al.* (1989).

#### Ovarian adhesions :

The adhesions of ovary were recorded in 21 cases (3.19%). Among 21 cases, 19 cases (2.89%) were of unilateral ovarian involvement and 2 cases (0.30%) were of bilateral ovarian involvement. In unilateral ovaries 10 cases (1.52%) were observed in right ovary and 9 cases (1.37%) in left ovary. These records matches with the findings of Sharma *et al.* (1967). However, Kulkarni (1974) and Khan *et al.* (1989) reported higher incidence of ovarian adhesions.

#### Uterus :

Pathological conditions of uterus were seen in 52 cases (7.90%). These conditions were further classified as, non-inflammatory conditions of uterus in 7 cases (1.06%), endometritis in 32 cases (4.86%), incidence of cysts in

Sr. No.	Polyclinic/ dispensary	Anoestrus	Repeat breeding	Retention of placenta	Metritis	Prolapse	Total conditions observed	Total no. of animals presented
1.	Veterinary Polyclinic, Veterinary College, Parbhani	-	-	1	1	-	2	110
2.	Veterinary Dispensary, Laakh Tq. Aundha (Nagnath) Dist Hingoli	72	1	1	2	-	76	251
3.	Veterinary Polyclinic Degloor, Dist Nanded	19	2	2	22	5	50	522
4.	Veterinary Polyclinic, Veterinary College, Udgir, Dist Latur	8	4	2	-	5	19	421
5.	Veterinary Dispensary, Nachanwel, Tq. Kannad, Dist. Aurangabad	15	3	1	1	-	20	209
	Total	114	10	7	26	10	167	1513
	Percentage	68.26%	5.99%	4.19%	15.57%	5.99%	11.03%	

uterus was observed in 4 cases (0.60%) and fallopian cyst in 1 case (0.15%).

Mukherjee and Nayak (1977) reported approximately similar incidence in their study. However, a low incidence have been recorded by Rao and Rajya (1976) and a high by Sharma *et al* (1967) and Dwivedi and Singh (1975).

#### **Non-inflammatory conditions of uterus :**

Non-inflammatory conditions of uterus were noted in 7 cases (1.06%) on the basis of gross examination. The non-inflammatory conditions are further classified as hydrometra in 5 cases (0.76%) and mucometra in 2 cases (0.30%).

The incidence of hydrometra and mucometra recorded in the present study appears to be comparable with the observations recorded by Rao and Rajya (1976). However, a higher incidence of hydrometra and mucometra have been recorded by Bhattacharya *et al.* (1954) in buffalo, cows and buffalo heifers and Mukherjee and Nayak (1977), respectively.

In the present study the incidence of mucometra is closely related to observations recorded by Rao and Rajya (1976) and higher incidence of mucometra has been recorded by Mukherjee and Nayak (1977).

#### **Endometritis :**

Endometritis was observed in 32 cases (4.86%). It was further classified as, non-suppurative endometritis seen in 11 cases (1.67%), suppurative endometritis noted in 9 cases (1.37%), cystic endometritis recorded in only one case (0.15%) and chronic non-purulent endometritis with adhesions found in 11 cases (1.67%). The incidence of endometritis recorded in the present study is higher than the incidence recorded by Rao and Rajya (1976).

Bhattacharya *et al.* (1954) reported the incidence of metritis (27.15%) in buffalo cows and buffalo heifers (11.0%). Rao and Rajya (1976) recorded the incidence of acute necrotic endometritis (0.15%), sub-acute endometritis (0.20%), chronic endometritis (0.45%) and cystic endometritis (0.40%). These observations supports the findings of present study. Endometritis results mainly from infection during coitus or artificial insemination or during manual handling of uterus for therapeutic purposes and secondly from introduction of too hot or too irritating chemicals in uterus, resulting in irritation and injuring the delicate mucosa.

#### **Cysts in uterus :**

The incidence of cysts in the present studies was observed in 4 cases (0.60%). These observations are lower than the observations of Bhattacharya *et al.* (1954), reported higher incidence of cysts in their study.

#### **Fallopian cyst (Hydrosalpinx) :**

The incidence of fallopian cyst in the present study was noted in 1 case (0.15%).

Ghora *et al.* (1997) reported follicular cyst in 1.9 per cent cases, whereas, Pandit *et al.* (1982) reported the higher incidence of the hydrosalpinx in their study.

#### **Long or coiled horns :**

The long uterine horns in 8 cases (1.22%) were recorded in present study.

The study can be concluded as, Anoestrus was the major disorder noted in buffaloes followed by Ovarian adhesions and endometritis pathological condition in buffaloes.

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