RETROSPECTIVE ANALYSIS OF DISEASE CONDITIONS AMONG REPRODUCTIVE DOMESTIC RUMINANTS IN SOKOTO, NIGERIA

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ABSTRACT

A fifteen-year (1991 – 2005) study of reproductive cases in animals presented to the Usmanu Danfodio University Veterinary Teaching Hospital, Sokoto, were analyzed based on species, disease condition and sex using clinical case files of Sheep, goat and cattle. Within the study period a total of 88 reproductive cases were handled out of which 53 (57.95 %) occurred in sheep, 32(36.36 %) goat and 5(5.68 %) cattle. Dystocia 23(26.13 %), Pregnancy toxaemia 11(12.50 %), mastitis 9(10.23 %), castration 5(5.68 %) and orchitis 3(3.41 %) were the diseases recorded. Reproductive cases were higher in females 77(87.5 %) than in males 11(12.5 %). From the study, reproductive cases were most prevalent in sheep than in goats and cattle.

Keywords: Livestock reproduction, Sheep, Goat, Cattle, Dystocia, Pregnancy toxaemia, Mastitis

INTRODUCTION

The production of livestock is dependant greatly on their well being particularly their reproductive performances. Disease conditions always impair livestock production (Akerejola *et al.*, 1979; Lamorde, 1996). Apart from this, several other factors such as environment and nutrition, especially inadequate protein intake (Kumidiake e*t al.,* 1981; Smith and Somade, 1994) decrease reproductive performance.

The knowledge of diseases prevalence give useful information on disease pattern and thus can be used in preventing diseases as well as formulating policies for future management of prevalent diseases. Although analysis of some common disease have been conducted in different parts of Nigeria (Esuruoso, 1972; Ugochukwu and Ephraim, 1985; Cadmus *et al.*, 2001), Ebbo *et al.* (2003) reported that there was little information on the prevalence of different livestock disease in Sokoto. However, only Wosu and Anene (1990) in Nsukka and Waziri *et al.* (2006) in Maiduguri have analyzed reproductive disease condition among ruminants.

This study is therefore aimed at determining the pattern of reproductive diseases encountered at the Usmanu Danfodio University Veterinary Teaching Hospital, Sokoto, within a fifteen-year period.

MATERIALS AND METHODS

The data obtained are from clinical case files of sheep, goat and cattle presented to the Usmanu Danfodio University Veterinary Teaching Hospital Sokoto, Nigeria from January 1991 – December 2005 (fifteen-year period). The data were analyzed based on species, disease condition and sex using percentage distribution in a tabular form.

RESULTS

The analysis of various reproductive disease conditions in different sex is presented according to specie in Table I. A total of eighty-eight (88) reproductive cases were handled in domestic ruminants within the study period. Sheep had the highest prevalence of 51(57.95 %), followed by goats 32(36.36 %) then cattle 5(5.68 %). Dystocia 23(26.13 %) was the most prevalent reproductive condition, this is followed by Pregnancy toxaemia 11(12.50 %), then Retained placenta 10(11.36 %), Mastitis 9(10.23 %); Paturient paresis 7(7.95%); Abortion 6(6.82 %); Castration 5(5.68 %); Vaginal prolapsed 4(4.55%); Stillbirth 4(4.55%); Orchitis 3(3.41 %); Uterine prolapse 3(3.41 %); Balanopostitis 2(2.27 %); and Phimosis 1(1.14 %).

Table 1: Distribution of reproductive diseases according to species and sex

Disease condition	Cattle	Goat	Sheep	Total	Prevalence rate (%)
Dystocia	1	9	13	23	26.13
Preg. Toxaemia	-	1	10	11	12.50
Parturient Paresis	-	3	4	7	7.95
Retained placenta	1	4	5	10	11.36
Abortion	1	3	2	6	6.82
Stillbirth	-	1	3	4	4.55
Uterine	-	-	3	3	3.41
Vaginal Prolapse	-	1	3	4	4.55
Mastitis	1	3	5	9	10.23
Orchitis	-	2	1	3	3.41*
Balanopostitis	-	-	2	2	2.27*
Castration	-	5	-	5	5.68*
Phimosis	1	-	-	1	1.14*
Total	5 (5.68%)	32 (36.36%)	51 (57.98)	88	100

** Prevalence of Male reproductive disease which sum-up to 12.5%.*

Reproductive cases in females 77(87.5 %) were more prevalent than males 11(12.5 %).

DISCUSSION

Higher prevalence of reproductive disease conditions in small ruminants (sheep and goat) over cattle has been recorded. The high number in the animal species of small ruminants is as a result of high number of cases handled in the hospital coupled with the low cost of rearing. This is consistent with the reports of Mohammed *et al.* (1994-95) and Waziri *et al.* (2006) but contradicts that of Wosu *et al*. (1990). The religious and socio-economic importance of sheep in Northern Nigeria may explain why most inhabitants of Sokoto keep them as it is used during festive periods such as *eld-el kabir*, wedding and naming ceremonies. The number of cattle cases handled within the study period was low despite the report of Williams *et al.* (2000) that Sokoto state is the second largest cattle producing state in Nigeria. The low numbers of cattle cases handled may probably be due to high cost of rearing cattle in the metropolis as well as the high cost of transporting disease cattle from the rural parts of the state to the Veterinary Teaching Hospital, Sokoto.

Dystocia was the most prevalent reproductive condition. This is consistent with the reports of Wosu and Anene (1990) in Nsukka and Waziri *et al.* (2006) in Maiduguri. Dystocia is caused by twinning, poor feeding and management (Arthur *et al.,* 1998). Free roaming of animals is a common scenario in Sokoto metropolis. Na-Allah *et al*. (2003) reported that most ruminant livestock kept by inhabitants of Sokoto are reared under semi-extensive system of production in which they are allowed to roam freely; this probably explains the high occurrence of dystocia and pregnancy toxaemia. Castration was the most frequent reproductive condition recorded in male goats. Castration is known to improve growth and thus meat quality in castrated ruminants.

Reproductive disease condition were more in females probably due to their unique position as essential reproductive vessels and the fact that females are reared for a longer periods than males. This was consistent with the report of Waziri *et al*. (2006) in Maiduguri.

Conclusion: The study showed that reproductive disease conditions were more frequent in sheep and female sexes were more vulnerable, with dystocia being the most prevalent reproductive condition encountered within the period.

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