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# Type and Pattern of Bovine Diseases and Disorders Treated at Teaching Veterinary Hospitals - Chennai, Tamil Nadu

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**ABSTRACT**

*The study was conducted to record the various bovine disease and disorders treated at teaching veterinary hospitals. The data regarding details of bovine diseases and disorders treated were collected from Madras veterinary College Teaching Hospital and Veterinary University Peripheral Hospital, Madhavaram for the one year period (May-2017 to April 2018). In both MVCTH and VUPH the majority of the cases were medicine cases (59.04 per cent and 58.39 per cent, respectively). Among medicinal cases mastitis (16.28 per cent) and anorexia (12.50) were major reported case at MVCTH and anorexia (19.47 per cent) and enteritis (17.97 per cent) were the major cases at VUPH. Wounds were the major reported surgical case in both MVCTH and VUPH (26.67 per cent and 27.36 per cent, respectively). In case of gynaeco-obstetrical cases RFM (26.57 per cent) was the major reported case in MVCTH and metritis (28.04 per cent) was the major reported case at VUPH.*

***Key words:*** *Cattle, Prevalence, Teaching hospitals, Diseases and Disorders.*

## INTRODUCTION

Livestock is an important sub-sector of Indian agriculture with significant contribution towards economy and employment of rural populace. Tamil Nadu shares 4.6 per cent of (7.4 million tones) of total milk production of India with the growth rate of 4.3 per cent and per capita consumption of milk was 294 gram per day during 2016-17. Tamil Nadu produced 0.44 MT of meat during 2016-17 (White cattle-0.33 MT and buffalo- 0.1 MT), (Basic Animal Husbandry Statistics- Integrated sample survey-2017). The services of veterinary institutions play an important role in the growth of livestock sector by controlling and treating the important diseases of livestock. Though the various district wise prevalence of cattle diseases were available the type and pattern of bovine diseases and disorders treated at teaching veterinary hospitals are lacking hence an attempt has been made to record the various bovine disease and disorders treated at teaching veterinary hospitals. Livestock diseases play a crucial role in the life of livestock farmers because diseases not only lower the production but also weaken the farmers economically. Mortality resulting from diseases deprives the farmers of dairy earnings.

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Morbidity due to diseases is responsible for the short term and long term product losses. These losses are economically more important as compared to mortality[3]. The economic implications of animal diseases are becoming increasingly important at both farm and national levels, as diseases represent avoidable waste of scarce resources, especially crossbreeds, as they stand more susceptible to diseases, hardships and contingencies peculiar to the Indian climate[8].

## MATERIAL AND METHODS

For the present study Madras veterinary College Teaching Hospital (MVCTH), Chennai-07 and Veterinary University Peripheral Hospital (VUPH), Madhavaram-51 of Tamil Nadu Veterinary and Animal Sciences University (TANUVAS) were purposively selected. The number of new dairy animal cases received at the Teaching Veterinary Hospitals was collected for the one year period (May-2017 to April 2018). The required information for the present study was based on the secondary data available at MVCTH and VUPH. The clinical diseases and manifestations were classified in to three categories such as Medicinal, Surgical and Gynaeco-Obstetrical cases[7]. Medicinal cases were subcategorized as, mastitis, tick borne diseases, acidosis, ketosis, enteritis, simple indigestion, bloat, hypocalcaemia, anorexia/inappetence, respiratory tract infections, acariasis and others. Surgical cases were subcategorized as, fracture, teat abnormalities, joint ill/navel ill, wounds, hoof abnormalities, abscess, lamness, horn abnormalities, myiasis and others. Gynaeco-Obstetrics cases were subcategorized as, retained fetal membrane, dystocia, prolapse, postpartum metritis, torsion, endometritis, anestrous, repeat breeder and others. The collected data were tabulated and analyzed using percentage analysis.

**Type and pattern of fresh bovine cases received**

The results of fresh dairy cases treated at MVCTH and VUPH for a one year period from May-17 to April-18 is presented in table 1. It could be seen from the table that, in both MVCTH and VUPH the majority of the cases were medicine cases. A total of 3577 fresh dairy cases were treated at MVCTH during the reporting period, out of which 59.04 per cent (2112 numbers) were medicine cases followed by 26.42 per cent (945 numbers) surgery cases and 520 cases (14.54 per cent) were gynaecology and obstetrics cases. Similar pattern was observed by Karim, *et al.* [5] where, medicinal cases constituted highest percentage (86.5 per cent) in comparison to gynaeco-obstetrical (6.1 per cent) and surgical (7.3 per cent) cases. Parvez, *et al.*[7], also reported in his study that, medicinal cases constituted highest percentage (66.35 per cent) in comparison to surgical (24.04 per cent) cases and gynae-obstetrical (9.62 per cent) cases.

**Table 1: Details of new bovine cases received at various units (May-17 to Apr-18)**

| Sl. No | Particulars | MVCTH | VUPH |
|---|---|---|---|
| 1 | Medicine | 2112 (59.04) | 334 (58.39) |
| 2 | Surgery | 945 (26.42) | 106 (18.53) |
| 3 | Gynaecology and obstetrics | 520 (14.54) | 132 (23.08) |
| | Total | 3577 (100.00) | 572 (100.00) |

**Figures in the parentheses indicate the per cent to the total**

In case of VUPH, 58.39 per cent (334 numbers) were fresh medicine cases followed by 132 gynaecology and obstetrics cases (23.08 per cent) and 106 surgery cases (18.53

per cent). Since majority of the problems in dairy animal farming was due to improper management of feeding, vaccination, deworming and lack of bio-security measures etc, which results in medicinal diseases and disorders and hence most of the cases received were medicinal cases, whereas gynaecological and obstetrical problems mostly occurs during parturition and pregnancy and surgical cases were accidental in nature which were rare compared to medicinal cases.

**Type and pattern of medicinal cases reported**

The results of the fresh medicine cases received at both MVCTH and VUPH are presented in the table 2. In MVCTH, mastitis (16.28 per cent-344 numbers) was the major case treated during the reporting period. Mastitis is a major challenge in rearing dairy animal which occurs mainly because of unhygienic managemental practices like poor hygienic practices followed while milking, cleaning of the premises, cleaning of the milking utensils and cleaning of udder and the animal etc,. Since most of the animal owners in city are maintaining the animals within a very limited space, incidence of mastitis reported at MVCTH was higher.

**Table 2: Number of new cases received at LAC Medicine unit**

| Sl. No | Particulars | MVCTH | VUPH |
|---|---|---|---|
| **1** | Mastitis | 344 (16.28) | 52 (15.57) |
| **2** | Tick borne diseases | 172 (08.15) | 22 (06.59) |
| **3** | Acidosis | 176 (08.34) | 15 (04.49) |
| **4** | Ketosis | 56 (02.66) | 06 (01.79) |
| **5** | Enteritis | 188 (08.90) | 60 (17.97) |
| **6** | Simple indigestion | 248 (11.75) | 26 (07.79) |
| **7** | Bloat | 88 (04.16) | 13 (03.89) |
| **8** | Hypocalcaemia | 32 (01.51) | 13 (03.89) |
| **9** | Anorexia | 264 (12.50) | 65 (19.47) |
| **10** | Respiratory Tract Infections | 224 (10.60) | 26 (07.78) |
| **11** | Acariasis | 148 (07.00) | 15 (04.49) |
| **12** | Others | 172 (08.15) | 21 (06.28) |
| | **Total** | **2112 (100.00)** | **334 (100.00)** |

**Figures in the parentheses indicate the per cent to the total**

Mubarak *et al.*[6] also stated that, in adequate hygienic condition of dairy environment, poor milking procedure, poor animal health service and lack of proper attention to health of the mammary gland were important factors for the high prevalence of mastitis.

Anorexia was the next major disease (12.50 per cent) reported at MVCTH followed by simple indigestion (11.75 per cent), respiratory tract infections (10.60 per cent), enteritis (08.90 per cent), acidosis (08.34 per cent), tick borne diseases (08.15 per cent),

acariasis (07.00 per cent), bloat (04.16 per cent), ketosis (02.66 per cent), hypocalcaemia (01.51 per cent) and other diseases and disorders (08.15 per cent). In case of VUPH, anorexia was the major (19.47 per cent) reported case followed by enteritis (17.97 per cent), mastitis (15.57 per cent), respiratory tract infections (07.78 per cent), simple indigestion (07.78 per cent), tick borne diseases (06.59 per cent), acidosis (04.49 per cent), acariasis (04.49 per cent), bloat (03.89 per cent), hypocalcaemia (03.89 per cent), ketosis (01.79 per cent) and other diseases and disorders (06.28 per cent). Kabir *et al.*[4] recorded that among the 348 animals reported at the upazilla veterinary hospital-Ulipur, 27 were diagnosed with fever, 40 were with Digestive disorders, 21 were respiratory disorders, 23 were skin diseases, 125 were FMD, 5 were dysentery, 2 were BQ, 16 were papillomatosis, 4 were clinical mastitis, 47 were faciolosis, 5 were paramphistomiasis and 11 were anorexia.

Most of the animal cases reported for treatment both in MVCTH and VUPH were coming with the history of complete or partial loss of appetite which was reported in case sheet as anorexia because for some cases the confirmative diagnosis can't be made on the first day of treatment.

Apart from that, in the city availability and transport of green and dry fodder was highly limited and hence the city people are feeding the dairy animals with leftovers from home and hotels which results in digestive disorders like simple indigestion, acidosis, enteritis and bloat. Further, the city environment is not conducive for animal rearing which leads to variety of respiratory tract infections. Tick borne diseases like anaplasmosis, babesiosis and theileriosis were accounting for 8.14 per cent and 6.58 per cent of medicinal cases in MVCTH and VUPH, respectively. Chennai, being the coastal district and because of the dry climate which prevails during almost 8 to 9 months of a year, favors the onset, development and spread of ticks and hence the incidents of tick borne diseases were higher. Arunkumar and Nagarajan[1] reported prevalence rate of 12.9 per cent for anaplasmosis at Chennai.

**Type and pattern of surgical cases reported**

The results of fresh surgery cases reported at both MVCTH and VUPH are presented in table 3. Both in MVCTH and VUPH, wounds were the major cases (26.67 per cent and 27.36 per cent, respectively) reported. In case of MVCTH, the next major surgical ailment reported was lameness(11.43 per cent) followed by joint ill/navel ill (11.00 per cent), fracture (08.47 per cent), myiasis (08.25 per cent), hoof abnormalities (7.19 per cent), horn abnormalities (06.48 per cent), teat abnormalities (06.35 per cent) and 9.95 per cent of miscellaneous cases. Contrary to this results Karim, *et al.* [5] reported, prevalence of abscess (45.8 per cent), myiasis (20.80 per cent) and Navel ill (12.50 per cent).

**Table 3: Number of new cases received at LAC Surgery unit**

| Sl. No | Particulars | MVCTH | VUPH |
|---|---|---|---|
| 1 | Fracture | 80 (08.47) | 06 (05.67) |
| 2 | Teat abnormalities | 60 (06.35) | 07 (06.60) |
| 3 | Joint ill/navel ill | 104 (11.00) | 10 (09.44) |
| 4 | Wounds | 252 (26.67) | 29 (27.36) |
| 5 | Hoof abnormalities | 68 (07.19) | 03 (02.83) |
| 6 | Abscess | 37 (03.91) | 20 (18.86) |
| 7 | Lameness | 108 (11.43) | 12 (11.32) |
| 8 | Horn abnormalities | 64 (06.48) | 08 (07.54) |
| 10 | Myiasis | 78 (08.25) | 07 (06.60) |
| 11 | Others | 94 (09.95) | 04 (03.78) |
| | **Total** | **945 (100.00)** | **106 (100.00)** |

**Figures in the parentheses indicate the per cent to the total**

In case of VUPH, the second major disease reported was abscess (18.86 per cent) followed by lameness (11.32 per cent), joint ill/navel ill (09.44 per cent), horn abnormalities (07.54 per cent), myiasis (06.60 per cent), teat abnormalities (06.60 per cent), fracture (05.67 per cent) and 3.78 per cent of miscellaneous cases. Pallab, *et al.*[6] reported that, only 5.20 per cent of cases were surgical cases out of total reported cases at Chandanaish Upazilla of Chittagong district, Bangladesh.

Since in the Chennai city all the dairy animals were confined in very little space of streets and roads and the animals were left alone on the roads during day time, the animals were prone to more injuries and accidents by vehicles, which leads to majority of surgical conditions like wounds, fracture, abscess, lameness and hoof and horn abnormalities etc,.

**Type and pattern of gynaeco-obstetrical cases reported**

The results of fresh gynaecology and obstetrical (OG) cases reported at both MVCTH and VUPH are presented in the table 4. In case of MVCTH, Retained Fetal Membrane (RFM) was the major (26.57 per cent) reported case followed by dystocia (11.72 per cent), anestrous (10.77 per cent), metritis (10.39 per cent), endometritis (10.00 per cent), repeat breeders (05.19 per cent), abortion (04.62 per cent), torsion (03.27 per cent) and others (08.84 per cent).

In case of VUPH, metritis was the major (28.04 per cent) reported case followed by endometritis (19.69 per cent), RFM (18.19 per cent), dystocia (12.13 per cent), prolapse (06.60 per cent), anestrous (04.55 per cent), repeat breeders (03.78 per cent), abortion (03.78 per cent) and others (03.78 per cent). Karim, *et al.*[5] reported, the prevalence of RFM and repeat breeders at 30.00 per cent and 70.00 per cent, respectively. Most of the gynaecological problems occur due to improper feeding management (feeding the animals with feeds deficient in energy, protein and other essential minerals and vitamins) and indiscriminate breeding practices which leads to anestrous, endometritis and repeat breeders etc,. The obstetrical problems occurs mainly due to indiscriminate usage of drugs like oxytocin by the animal owners for milking which leads to hormonal imbalances in the animals thus causes problems like RFM, dystocia, prolapse and abortion etc,.

Conclusion:

It could be concluded that, in bovines medicinal cases are the major reported cases in teaching Veterinary hospitals in Chennai. Steps might be taken to reduce the digestive disorders by means of creating awareness to the dairy animal owners about the feeding management and the surgical problems may be controlled by providing good housing facilities to the animals. Study could be extended for the detailed prevalence of diseases of all livestock species in the urban areas.

**Table 4: Number of new bovine cases received at LAC-OG unit**

| Sl. No | Particulars | MVCTH | VUPH |
|---|---|---|---|
| 1 | RFM | 136 (26.57) | 24 (18.18) |
| 2 | Dystocia | 60 (11.72) | 16 (12.13) |
| 3 | Abortion | 24 (04.62) | 05 (03.78) |
| 4 | Prolapse | 48 (09.23) | 08 (06.06) |
| 5 | Metritis | 54 (10.39) | 37 (28.04) |
| 6 | Torsion | 17 (03.27) | 0 (0.00) |
| 7 | Endometritis | 52 (10.00) | 26 (19.69) |
| 8 | anestrous | 56 (10.77) | 06 (04.55) |
| 9 | Repeat breeders | 27 (05.19) | 05 (03.78) |
| 10 | Others | 26 (08.84) | 05 (03.78) |
| | Total | **520 (100.00)** | **132 (100.00)** |

**Figures in the parentheses indicate the per cent to the total**

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