

Therapeutic Management of Acute Clinical Mastitis in a Great Dane Bitch: A Case Report

Ajay Verma¹, Sowjanya², Sarthak³, Sanjeev⁴, Yamuna⁵ B, Srinivas⁶ A, Muralidhar⁷ D

1. Ajay Verma, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana, Punjab, India.

2. Sowjanya S SVVU College of Veterinary Science Gannavaram, Andhra Pradesh, India.

3. Sarthak CH, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana, Punjab, India.

4. Sanjeev K, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana, Punjab, India.

5. Yamuna B, College of Veterinary Science PVNRTVU, Rajendranagar, Telangana, India.

6. Srinivas A, College of Veterinary Science PVNRTVU, Rajendranagar, Telangana, India.

7. Muralidhar D, College of Veterinary Science PVNRTVU, Rajendranagar, Telangana, India.

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ABSTRACT: An intact 1 year 8 monthold Great dane bitch was presented to the hospital with a chief complaint of anorexia, lethargy and sudden swelling of right side mammary glands. The case was diagnosed as acute mastitis based on physical, clinical examination and bacteriological culture. The culture have shown the presence of *Streptococcus.canis* as a causative agent and then subjected to antimicrobial sensitivity test. The patient was successfully managed with a course of parenteral antibiotic, supportive and topical therapy till complete clinical recovery.

Key Words: Mastitis, Mammary glands, *Streptococcus.canis*, bitch

I. INTRODUCTION :

Mastitis is a medical term which refers to an inflammation with or without an infection of the mammary gland. It can occur in intact bitches of all breeds at various ages.

Canine mastitis is considered as a reproductive disease of an unusual type (Wiebe and Howard, 2009). Manifestation of mastitis is influenced either by an ascending infection of the mammary gland due to bacteria, any traumatic injury to the mammary tissues or unhygienic surroundings (Jutkowitz, 2005) and galactostasis. Among various isolates of bacteria *Escherichia coli*, *Staphylococci*, and *Streptococci* are considered as most common etiological agents of mastitis (Ververidis et al.,2007). Its severity ranges from acute one to chronic one (Traas et al., 2007). Most common clinical signs associated with mastitis are firm, painful, swollen, mammary gland which may also change in colour and appearance beside this there may or may not abnormal

secretion from the affected mammary gland. There may be development of gangrene in severely affected glands. Signalment, clinical signs, and cytological evaluation of milk are considered as basis of the diagnosis. Therapeutic management plan includes the use of antibiotics which are susceptible to the etiological agent and execute their action at mammary tissue bed.

History & Clinical Observations :

An intact Great dane bitch having an age of one year eight months weighing 45 kg was presented to Dr.Dog Pet Hospital Hyderabad with a history of anorexia, fever, generalized malaise, sudden swelling of right side mammary glands (Fig 1) General physical and clinical examination revealed erythematous swelling of all right side mammary glands which are warm to touch, pyrexia (104.2⁰F), and enlarged lymph nodes, congested conjunctival mucous membranes and moderate reddish brown vaginal discharge. Blood tinged purulent mammary secretion was collected aseptically by squeezing of the affected glands into a sterile container for microbiological examination. Bacteriological culture revealed *Streptococcus.canis* as the causative agent and in disc diffusion antimicrobial sensitivity test, the isolate was found sensitive to ampicillin, cefazolin, amoxicillin/clavulanic acid, ciprofloxacin, levofloxacin, azithromycin, cotrimoxazole, linezolid, teicoplanin, vancomycin.

Treatment and Discussion:

After diagnosis the treatment of affected bitch was initiated by parenteral administration of

antimicrobials ceftriaxone and tazobactam @20mg/kg I/V, enrofloxacin @5mg/kg I/M SID, pantoprazole @1mg/kg, along with supportive intravenous fluid therapy using Ringer lactate @10ml/kg, metronidazole @mg/kg for 5 days besides antimicrobial therapy, to reduce the severity of inflammation serratiopeptidase @2mg/kg PO was recommended for 3 days. In addition to this the hormonal therapy was initiated from the 2nd day onwards using tablet cabergoline 0.25mg and methergine 0.125mg SID for 5 days. The owner should also advised to strip out the milk and and mammary contents with gloved hands, and to clean the glands daily with betadine (Povidone iodine) followed by application of clean cabbage leaves, hot compressions using potash alum and to apply mastilep topical herbal ointment for 7days. The animal responded well to the treatment and an uneventful recovery with marked reduction in the inflammation of mammary glands (Fig 2)was observed after 7days of treatment. We followed up the case for a month; the bitch remains healthy and active with no recurrence of clinical or subclinical acute mastitis (Fig 3).

As we all know that the canine mastitis is an infrequent condition (Schlafer and Miller, 2007) and arises mostly due to the ascending bacterial inection. *Streptococcus canis* is considered as main etiological agent in the present case. The nature of the clinical mastitis in bitches either may be localized or diffuse where single or multiple mammary glands may be infected (Barsanti, 2006). In the present case all mammary glands of right side got affected. The clinical picture of the affected glands presented warm, erythematous, and painful condition similar to the findings of Vaisu et al 2015. Therapeutic management of mastitis must be initiated immediately by the use of antibiotics whose spectra of action is wide and effective against the common causative isolates of mastitis (Wiebe and Howard, 2009). We followed the same principle of treatment in the present case.

II. CONCLUSION :

Disorders of the mammary glands are frequent health problems in bitches of various ages. Among them mastitis is relatively common in lactating bitches, or in false pregnancy. When left untreated it can be life-threatening, so proper diagnosis and specific treatment plays a significant role. The present study describes acute clinical mastitis in a great dane bitch and its successful management with parenteral specific antimicrobial,

supportive fluid therapy along with hormonal and topical therapy.

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Fig 1 Showing severe erythematous swelling of right mammary chain



Fig 2 Showing marked reduction in swelling after 1 week of treatment



Fig 3 Showing Complete recovery after 1 month