Acinetobacter mammitis in a Great Dane bitch and its managements

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Abstract

A 1.5 year old Great dane bitch was brought to Department of Veterinary Medicine, TVCC, RIVER with a history of whelped a single puppy 50 days back and enlargement of left cranial abdominal, left and right caudal abdominal mammary glands with watery milk for past 3 days. Bacteriological culture revealed Acinetobacter species. It was found sensitive to imipenem, doxycycline, ciprofloxacin, cefotaxime, amoxicillin, amoxicillin clavulanic acid, cefpodoxime, gentamicin, cefixime and ceftriaxone. The dog was treated with cefotaxime @ 30mg/kg body weight for 5 days B.I.D. Swelling of mammary gland reduced and animal recovered after 5 days of treatment.

Keywords: Mammitis, dog, culture, Acinetobacter, Cefotaxime

1. Introduction

Mammitis represents the inflammation of the mammary gland tissue (Boden, 2005) [3]. Can affect one or more sections of the glandular tissue or one or more mammary glands. Mammary infections can be acute and life threatening (Johnston et al., 2001) [8]. Staphylococcus pseudintermedius and Streptococcus canis are actual chief pathogens in dogs and cats (Weese, 2008) [12]. It has been recommended that bacteria isolated from the mammary gland and vagina are liable for neonatal infections (Sager and Remmers, 1990) [10]. Acinetobacter species are abundant in environment and have remained in soil, water, animals and humans (Doughari et al., 2011) [4]. The genus Acinetobacter comprises of severely aerobic, gram negative coccal bacilli, nonmotile, rods, Catalase – positive, Indole and Oxidase – negative, Non-fermentative (Allen et al., 2006) [1]. Utmost strains of Acinetobacter can develop in usual culture media. Acinetobacter spp. has a natural tendency to develop antibiotic resistance extremely and rapidly. Acinetobacter baumannii also appeared to be the predominant pathogenic species in dogs and cat (Francey et al., 2000) [5].

2. Case history and observation

A 1.5 year old Great dane bitch was brought to Department of Veterinary Medicine TVCC, RIVER with a history of whelped a single puppy 50 days back and enlargement of left cranial abdominal, left and right caudal abdominal mammary glands with watery milk for past 3 days. On clinical examination rectal temperature was 39.6°C, pink conjunctival mucus membrane, normal palpable lymph node, hard, hot and painful mammary gland evinced on palpation. The milk collected from the mammary gland was watery in consistency. Microbiological analysis - Bacteriological culture of milk revealed Acinetobacter species. Antibiotic Sensitivity Test – Sensitive to imipenem, doxycycline, ciprofloxacin, cefotaxime, amoxicillin, amoxicillin clavulanic acid, cefpodoxime, gentamicin, cefixime and ceftriaxone.

3. Treatment and Discussion

The dog was treated with cefotaxime @ 30mg/kg body weight for 5 days B.I.D. Nimesulide gel was applied over the gland. Swelling of mammary gland reduced and animal recovered after 5 days of treatment.

Acinetobacter is an evolving adaptable pathogen in veterinary medicine. The incidence in animals and humans similarly raises concern about whether the bacteria can spread from animals to humans or whether the animals must attained the bacteria from humans. The incidence of genotypically correlated, antimicrobial drug resistant Acinetobacter strains in
hospitalized animals recommends that these bacteria are most probable nosocomial pathogens for animals (Sabrina et al., 2011) [9]. *Acinetobacter* an opportunistic pathogen responsible for nosocomial infections with considerable morbidity and mortality in hospitalized human patients. Dogs and people live in close contact risk of bacteria transfer from one to the other are high (Wedley et al., 2011) [11]. Transfer of milk pathogens from humans to bitch milk is therefore possible. Extra care should be provided when handling puppies and the bitch’s mammary glands by owners and veterinary staff. Laboratory test should become the gold standard when veterinary specialists start to manage mammary gland infections (Eckersall et al., 1999) [6]. Antiseptics we can use to clear the pathogens - Chlorine dioxide and betadine (James et al., 2006) [7]. Veterinary clinics face an excessive challenge concerning anticipation, control and management of infections with these organisms, related to circumstances in human hospitals. In conclusion, the probability of spread from humans to animals or vice versa needs special consideration (Sabrina et al., 2011) [9].

**Fig 1:** Enlargement of left cranial, left and right caudal abdominal mammary glands affected by *Acinetobacter*

**References**