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Clinical Management of Haemogalactia in a Goat: A Case Report

Chayanika Mazumder*, M.V.Sc.

Block Veterinary Officer, Block Vetrinary Dispensary, Srijangram, District- Bongaigaon,

Animal Husbandry & Veterinary Department, Govt. of Assam, India

Abstract: A three years old Goat was presented to the Block Veterinary Dispensary, Srijangram with a history of haemogalactia for 4 days after parturition. Clinical examination revealed that all the vital parameters were within the normal limits. California mastitis test (CMT) was found to be negative. On the basis of history and clinical examination, the case was diagnosed to be of haemogalactia. The Goat was treated with Inj. Ceftriaxone @ 10 mg/kg BW IM for 5 days, Inj. Tranexamic acid @ 5 mg/kg BW, IV, SID along with adrenaline (intramammary), serratiopeptidase (PO) for 5 days. Improvement in condition was observed after three days of treatment and completely recovered after five days of treatment.

Keywords: adrenaline, CMT, goat, haemogalactia, tranexamic acid.

I. INTRODUCTION

Haemogalactia (blood in milk) is also known as Rose milk/Pinkish milk depending on the intensity of colour. There are several causes of haemogalactia. Most forms of mastitis in goats are also traumatic or metabolic. Blood tinge or haemogalactia in milk might be attributed to injury in capillaries of mammary glands. Pink milk or blood in milk can be sign that the goat has not enough available blood calcium. Any other haemorrhage by the passage of blood cells, through intact capillary walls into the tissue, is considered to be pathological and results from the epithelial lining damage of the teat cistern, owing to harsh milking (Heidrich and Renk, 1967). Leptospirosis is a common cause of blood in milk in dairy animals. In such condition the milk from all quarters would be red in colour, thick in consistency and usually contains blood clots and milk clots (Champawat *et al.*, 1984. Some viruses and red yeast (*Monascus purpureus*) may cause systemic infections associated with intravascular hemolysis and capillary damage in udder leading to reddish or pinkish discolouration of milk (Rana *et al.*, 2009). Some other causes of haemogalactia are thrombocytopenia, deficiency of vitamin c, rough milking, mastitis, feed containing natural toxin etc. The current case report documents haemogalactia in a goat and its successful clinical management.

II. CASE HISTORY

A Goat aged about 3 years was presented with a complaint of blood in milk from the right quarter for the past 4 days after parturition to the Block Veterinary Dispensary, Srijangram. The Goat was in the 2nd lactation and there was no abnormality in appetite, urination and defecation with no history of any trauma to the udder. On general examination all the vital parameters were within the normal ranges. Based on the history and clinical signs, the case was diagnosed as haemogalactia (Fig. 1).

III. RESULT AND DISCUSSION

The vital parameters were within the normal limits (temperature: 101.5°F; pulse rate: 60 per minute; respiration rate: 25 per minute). The colour of the milk was dark pinkish. The milk samples from affected quarter was collected in a sterile tube and left undisturbed for few hours, there was blood clot at the bottom of the container, which indicates that reddish discolouration of milk was due to intact red blood cells (haemorrhage). Absence of blood clot indicated reddish discolouration of milk due to lysis of red blood cells (haemolysis) as per the method described earlier (George *et al.*, 2008). Also the milk sample from the affected quarter was found to be negative for mastitis. There was no gel formation in California mastitis test (CMT), which indicated absence of mastitis (Fig. 2). Based on the history and

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clinical examination the condition was described as haemogalactia. In our case, the goat was treated with inj. Tranexamic acid (TexableedTM) @ 5 mg/kg BW, IV, SID, Inj. ceftriaxone @ 10 mg/kg BW, IM, SID for 5 days, 1 ml Adrenaline mixed with 4 ml of normal saline and infused intramammary daily for three days. Serratiopeptidase @ 1 boluses, PO, BID for five consecutive days along with ice cold fomentation of the udder was advised. Improvement in condition in the ailing goat was recorded after three days and completely cured after five days of treatment.

There are multiple causes that attributed to haemogalactia in dairy animals. Earlier other researchers have reported that bloody milk in dairy animals could be the cause of local or systemic infections viz mastitis or leptospirosis (Radostits et *al*., 2007; George *et al*., 2008). The udders of the affected aniamls usually flaccid and the animals commonly shows other clinical signs such as fever, hemoglobinuria, decrease in appetite, abortion etc. (Radostits *et al*., 2007; George *et al*., 2008). In leptospirosis, the bloody milk is usually thick in consistency and contains blood and milk clots. But in the present study no such signs were noticed. The milk sample from the affected quarter was found to be negative for mastitis in the current study. Most forms of mastitis in goats are also metabolic or traumatic. Metabolic disturbance is usually caused by lack of available blood calcium. It can happen any time in lactation but most usually in the first 3-4 months of lactation. Haemogalactia noticed, in this case, might be due to rupture of capillary blood of the mammary gland. Hungerford, (1990) also stated that the traumatic rupture of some varicose blood vessel within the lactiferous sinus is the most frequent cause of reddish discolouration of milk. In the present study, the goat was treated with parenteral tranexamic acid along with intramammary infusion of adrenaline. Different treatments for haemogalactia are available which includes parenteral calcium, parenteral and local coagulants, local and parenteral vasoconstrictors, antioxidants, antibiotics, blood transfusion, homeopathic and ethnoveterinary treatment practices (Muhammad and Rashid, 2015). Tranexamic acid is in a class of medications called antifibrinolytics. It works by blocking the breakdown of blood clots, which prevents bleeding. Parenteral injections of coagulants such as tranexamic acid and adrenochrome are likely to give better cure rates than calcium borogluconate (Radostits *et al*., 2007; Muhammad and Rashid, 2015). The circulatory system of the udder is very sensitive to the vasoconstrictor action of adrenaline (Heidrich and Renk, 1967; Muhammad and Rashid, 2015). Therapeutic efficacy of intramammary adrenaline in the management of haemogalactia has been described earlier (Venkatesan *et al*., 2017).

A B

Fig. 1 Blood in milk

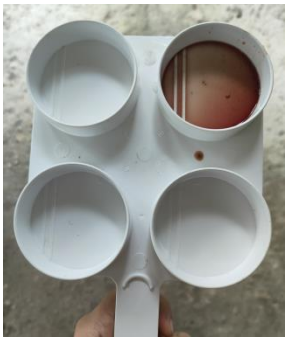

Fig. 2 Negative result of CMT

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IV. CONCLUSION

The present case reported clinical management of haemogalactia in a Goat and its successful clinical management with parenteral tranexamic acid, ceftriazone, intramammary adrenaline and serratiopeptidase (PO) in a postpartum goat.

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