

## **Surgical management of webbed teat in a cow**

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**Abstract:** A four year old jersey cross bred cow was presented with webbed teat on the right hind quarter. Ultrasound scanning revealed the presence of an oblique teat sinus with streak canal in the middle part of the teat with the size of 24.6mm in length and 3.6mm in width. Surgical correction of the teat was done under Xylazine sedation and the wound was protected with collagen + calcium alginate film to favor early wound healing. .

**Keywords:** webbed teat, supernumerary teat, Siamese teat, congenital teat affection

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### **I. Introduction**

Supernumerary teats are the most common congenital abnormality, which is likely heritable in dairy cattle. Supernumerary teats that are joined to one of the four major teats are called webbed or Siamese teats. In webbed teat, the teat and gland cisterns of the adjacent glands have common wall and their lumens do not communicate and is not a common congenital affections in cattle (Ducharme *et al.* (1987). They may appear as distinct teator only as small raised areas on the walls of the teat. This paper discuss the surgical management of webbed teat in a cow.

### **II. Materials and Methods**

A 4- year old, cross bred Jersey primiparous cow, calved 2 months back was presented to the Teaching Veterinary Clinical Campus, Rajiv Gandhi Institute of Veterinary Education and Research, Puducherry, with a history of milk flowing through an opening at the middle part of the right hind teat while milking since after parturition. On clinical examination a small raised area opening was noticed on the teat wall. Physiological parameters and haemogram were within normal range. The milk from the affected teat was normal in color, consistency, pH and negative for mastitis by strip cup test (Mastect - Indian Immunologicals Ltd., India).

Probing the teat confirmed its tip reaching the teat cistern and milk could be collected by passing a sterile blunt hypodermic needle (Fig.1). Ultrasonographical examination of the teat with water bath method using vertical scan with 7.5 MHZ linear probe (Aruljothi *et al.*, 2013) confirmed the presence of an oblique teat sinus with streak canal in the middle part of the teat with the size of 24.6mm in length and 3.6mm in width (Fig.2). The condition was diagnosed as webbed teat and surgical correction was advised.

### **III. Results and Discussion**

The animal was sedated with Inj. Xylazine (Xylaxin- Indian Immunologicals, Hyderabad) @ 0.1 mg/kg b. wt intravenously and performed ring block using 2% Lignocaine hydrochloride ( Modern laboratories, Mumbai) at the base of the teat. Prepared the affected teat for aseptic surgery. A metal probe was introduced through the additional teat opening and incised the skin cutting all the layers along with the probe to expose the teat cistern and was excised and removed. The mucosal layer was sutured in a simple continuous pattern using 3/0 polyglactin 910. A strip of Collagen – Calcium alginate film (Helix Pharma, Pondicherry) was applied over it and fixed in situ by subcuticular sutures. The skin was apposed in a simple interrupted pattern using 3/0 polyglactin 910 (Vicryl Plus – Johnson and Johnson, Mumbai). A sterile prosthetic tube made up of modified polyvinyl chloride (Infant feeding tube No. 7 - Romsons Scientific and Surgical India) was introduced into the lumen and fixed to the skin at the tip of the teat externally using braided silk No. 0 for infusing the medicine and to close the teat canal to avoid the postoperative contamination. The suture line was covered with Collagen – Calcium alginate film and protected with water proof band-aid (Fig.3). The animal was administered with Inj. Streptomycin – Procaine penicillin (Dicrysticin- S- Zydus AHL) @ 2.5 gm IM daily for 7 days. The Collagen – Calcium alginate film was changed after 4 days and the sutures were removed on 10<sup>th</sup> day. The animal recovered uneventfully. Anesthetic technique employed in the present study was found satisfactory for performing the surgery of the teat which is in accordance with that of Tyagi and Singh (1996). Seeh, *et al.* (1996) used visual methods (sonography/ endoscopy) for the diagnosis of a webbed teat in cattle. Webbed teats need to be repaired surgically as suggested by George *et al.* (2008). Makady *et al.* (1991) recommended a three layer suture pattern using absorbable suture material for faster and satisfactory healing of incised wounds on the teat. Modified PVC tubes employed was useful in maintaining patency of the teat lumen

postoperatively which is in accordance with that observed by Aruljothi *et.al.* (2012).Jianqiet.*al.*(2002) compared calcium alginate film with collagen membrane for guided bone regeneration in mandibular defects in rabbits and found calcium alginate more effective. TheCollagen- calcium alginate facilitates wound healing by maintaining a moist environment and helps to clean the wound. The bacteria are entrapped in the gel like exudate absorbed and are then removed during dressing.

#### IV. Conclusion

Webbed teat in the middle part of the right hind teat in a cow and its successful surgical management using collagen-calcium alginate film and of modified polyvinyl chloride as teat insert is reported.

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#### Legend



Fig.1.Confirmation of teat sinus by passing a sterile blunt hypodermic needle



Fig.2 Ultrasonographical image showing the webbed teat with streak canal



**Fig.3.** Suture line protected with water proof band-aid