

## Review Article

# Affections of Udder and Teat in Cattle and Buffaloes

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### Abstract

A healthy udder and teat is one of the important parts of the milch animals. Healthy udder produces good-quality milk for human consumption and calf. Udder and Teat affections are most common in milch animals. Proper care of affection of teat and udder is very important for maintenance of animal health. Udder and teat affections always lead to economic loss of dairy man and farmers by decrease milk production, possible loss of quarter, decrease cost of animal and lastly affect the economic value of milch animals. Inflammation of the udder and teat can be occurs due to different injuries and infection like viral, bacterial and fungal. The viral infections like; bovine herpes mammillitis, cowpox and pseudo cowpox, vesicular stomatitis, and fibropapillomas (warts). Other systemic disease that also affects the teats is foot-and-mouth disease. Viral infections vary in their severity, infectivity and frequency of occurrence. Main concept of this article is on the most common viral udder and teat affections which causes by different infections in cattle and buffaloes.

**Keywords:** Affections; Udder; Teat; Wart; Cow and Buffalo

### Introduction

Cow and buffalo udder has four quarters each of which is a separate unit. Each quarter is an independent compartment. Affection of one quarter does not necessitate the involvement of the other quarters. In buffaloes the anterior teats are shorter than the posterior. In cow, the teats of the anterior quarters are longer than the posterior. This makes the anterior teats of the cow and the posterior teats of buffaloes more prone to injuries. In dairy cows and buffaloes, the shape, structural and functional integrity of the teat tissues especially the teat canal and the sphincter, anatomical differences such as cisternal size, volume, teat and teat canal length and diameter, and physiological variance such as milk secretion process and time vary with breed, age, nutritional status, phase of lactation and disease condition. These factors are predisposing factors of the udder health and productive life of dairy cows and buffaloes and play an important role in economic and hygienic milk production [1].

Affection of teat and udder skin is usually caused by viruses, pyogenic bacteria, necrotizing bacteria or fungi. Lesions may af-

fect the epithelium of the teat orifice, the teat barrel and the udder skin. Viral infections usually cause primary lesions. Bacterial infections may cause primary lesions or be secondary infections of pre-existing viral lesions or trauma. Viral infections vary in severity, infectivity and frequency of occurrence. Inflammation to the teat can be caused by many types of injury including infectious agents and their toxins, physical trauma or chemical irritants. Changes in the pliability of teat tissue caused by congestion or edema may change the resistance of the teat canal to bacterial invasion [2].

Reported that physical injury to the teat might result from chronic mastitis, traumatic hand milking, calves sucking each other and tick bites [3]. According to [4] the treatment of teat problems in many countries may be uneconomic thus early culling of cows with teat problems which fail to respond to simple management may be more economic but in developing world with small herds the individual cow remains a valuable resource and the owner demanded maximum care and attention to teat conditions.

### Common Udder and Teat Affections

#### Pseudo Cowpox

The causative agent of pseudo cowpox is a member of the

genus Para poxvirus, with close similarity to the viruses of infectious popular stomatitis and contagious ecthyma [5]. Freshly calved and recently introduced cattle are most susceptible, but all adult cattle in a herd, including dry cows, are likely to be affected. The disease does not appear to occur in animals less than 2 years of age unless they have calved. Pseudo cowpox is relatively benign, most losses occurring as a result of difficulty in milking and an increase in the incidence of mastitis [5]. Para poxvirus infection occurs through scarified or damaged skin followed by virus replication in keratinocytes [6,7]. Virus replication near the port of entry is accompanied by a well-characterized clinical course that progresses through the stages of macules, papules, vesicles, pustules, and scabs [7]. The disease is transmissible to humans. Human par poxvirus infection is generally occupational, affecting milkers or other personnel in contact with affected animals, causing lesions called "milker's nodule" or "pseudo cowpox" [6,8]. Treatment and isolation of affected cows and milking affected cow last, udder washing, and disinfection of tea cups, appear to have little effect on the spread of the disease. An iodophor teat dip is recommended as the most effective control measure [9].

### **Bovine Ulcerative Mammillitis (Bovine Herpes Virus II)**

Bovine herpes virus II causes an acute, ulcerative condition of teat and udder skin of dairy cows. It's occurred sporadically in nature or in outbreak and may result in reduced milk production and increased susceptibility to bacterial mastitis. Early signs may vary but the lesions often begin as one or more thickened, edematous plaques of varying size on the skin of one or more teats [10]. Diagnosis is based on clinical signs and confirmed by histopathology or by virus isolation from early lesions. Treatment is directed toward supportive care, as there is no effective therapy for this virus. The use of iodophore containing teat dips with added emollients may help to inactivate the virus.

### **Bovine Warts (Bovine Papilloma Virus)**

Bovine papilloma viruses cause papillomatosis or warts on teats. Supposedly up to six separate strains of papilloma virus occur with at least two identified as the cause of warts on teats. Many teats and herds only show 'rice grain' or small, smooth and flat, white warts anywhere on the teat. These warts are rarely of any problem to milking or mastitis [11]. The teat papilloma incidences (1.65 %) and was higher incidence in right hind quarters (0.67 %), followed by right forequarters (0.32%) but in the left hind quarter about and left forequarter reached to (0.00%) [12].

### **Teat End Hyperkeratosis**

Teat-end hyperkeratosis is a thickening of the skin that lines the teat canal and surrounds the external teat orifice. The condition is variously described as teat rings, teat flowers, teat erosion, callus formation, callosity, certification or teat-end roughness.

### **Dermatitis**

Dermatitis of the udder has a number of causes, including chemical irritants, sunburn, and bacterial infection. The udder can be exposed to chemical irritants from bedding additives (eg, some types of limestone) or chemicals used during milking. The irritation usually resolves after removal of the offending substance, but gentle udder washes and use of emollient products can accelerate healing. Udder impetigo (udder acne) is a bacterial dermatitis characterized by development of small pustules on the skin of the udder and teats. Staphylococci usually can be isolated from the pustules. Treatment of udder impetigo consists of clipping hair from the affected area and washing the skin thoroughly each day until the condition resolves [10].

### **Udder Cleft Dermatitis**

Udder cleft dermatitis is mostly located between the fore-quarters and the abdomen. Characteristic features of UCD are a moist appearance, necrosis of skin and a foul odour. Udder cleft dermatitis is seen in all stages of lactation, also in non-lactating cows, but it is more common in older cows.

### **Foot & Mouth Disease Virus**

There is a need to differentiate Foot and Mouth Disease from more common viral teat infections as occasionally pustular lesions occur on teats before their appearance in the mouth [13]. However, the rapid development of other clinical signs including profuse salivation, nasal discharge, recumbency or foot stamping will quickly lead to a more correct diagnosis.

### **Conclusion**

If animals suspected any of these diseases and infection on dairy farm about above condition immediately contact to nearest veterinarian. Post-milking care reduces the incidence of sores, rough skin, and cracks necessary for viral penetration and development.

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