



ISSN: 2456-2912

VET 2023; 8(5): 238-240

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Received: 10-07-2023

Accepted: 15-08-2023

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## Successful management of cutaneous papillomatosis in crossbred jersey cows

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**Abstract**

Six Crossbred Jersey cows were brought with the history of having multiple small sized growths all over the body for the period of 1 to 6 months and treated locally. Physical examination revealed normal vital parameters. Small sized pedunculated growths were noticed in face, neck and all over the body. All the cases were diagnosed as cutaneous papilloma. All the animals were treated with Lithium Antimony Thiomolate (Anthiomaline), Autohemotherapy, Chlorpheniramine maleate injection and topical salicylic acid ointment for a month. All the animals were recovered without recurrence.

**Keywords:** Cows, papilloma, anthiomaline, autohemotherapy

**Introduction**

An infectious, contagious viral disease of cattle called bovine cutaneous papillomatosis, frequently referred to as a wart, affects all of the body's skin. Bovine papillomavirus (BPV), a double-stranded DNA virus from the papillomaviridae family, is the reason behind bovine papillomatosis. It is spread via the introduction of the virus through cuts made by insects. Warts are less common among native breeds of cows compared to crossbred and imported cows (Prasad *et al.*, 1980) [9]. According to Inayat *et al.* (1999) [5], this disease is largely acquired and established as a result of decreased immunity.

Warts appear as single, numerous, finger-shaped, or cauliflower-shaped growths that protrude from the skin. The body is covered in warts, however they are most common on the eyelids, ear, neck, udder, and teat. A self-limiting condition, cutaneous papillomatosis occasionally develops into a malignant form. Due to the immunological response, it can potentially totally heal and regress (Jelinek and Tachezy, 2005) [6]. The current investigation examined the interaction between autohemotherapy and lithium antimony thiomolate (Anthiomaline) in cows with cutaneous papillomatosis.

**Materials and Methods**

Six crossbred Jersey cows were included in this study with the history of having multiple growths throughout the body. Physical examination revealed physiological vital parameters. Multiple small sized pedunculated growths were noticed in the face, neck, limbs, udder and teat. The growth was soft and corrugated. These cows were diagnosed as cutaneous bovine papillomatosis. Hemato-biochemical analysis revealed leucocytosis. A single growth was collected after aseptic surgical excision for histopathological studies. Histopathology revealed finger like growth with hyperkeratosis.

The following treatment protocol was followed in all the six animals. Four shots of Inj. Lithium Antimony Thiomolate (Anthiomaline) 15 mL was administered intramuscularly with the interval of 48 hours. 20 mL venous blood was collected aseptically with 20 mL syringe cum 18 G needle and administered intramuscularly once in a week for consecutive four weeks (Hedge., 2011) [4]. Inj. Chlorpheniramine maleate @ 0.5 mg/kg was administered intramuscularly to prevent the allergic reactions. Ointment salicylic acid was used topically for a month. All of them were completely recovered approximately by the end of 4<sup>th</sup> week. All the cows were re-evaluated after two month for recurrence and no recurrence has reported.

**Results and Discussion**

Anthiomaline combined with autohemotherapy consistently produces positive outcomes in all animals. According to Kavitha *et al.* (2014) [7], autohemotherapy had the highest success rate of all available treatments (92%), followed by anthiomaline (81%). Our histopathological finding correlates with the studies of Ayman *et al.* (2019) [2]. In 2012, Dileepkumar and Ansari effectively treated cutaneous papillomatosis with anthiomaline.

Autohemotherapy was also employed as the sole treatment for bovine cutaneous papillomatosis by Hedge (2011) [4] and Chetan kumar G.K. (2011) [8]. According to Kumar *et al.* (2011) [8], autohaemotherapy is hypothesized to work by stimulating the circulating macrophages that lead to wart regression. Cows with papillomatosis were successfully treated with ointment Thuja (Archana *et al.* 2019) [1]. Kavitha *et al.* (2014) [7] also showed 75% reduction in the size of warts after administering Anthiomaline for four weeks.



**Fig 1:** Papillomatosis lesions noticed in udder (Day 0)



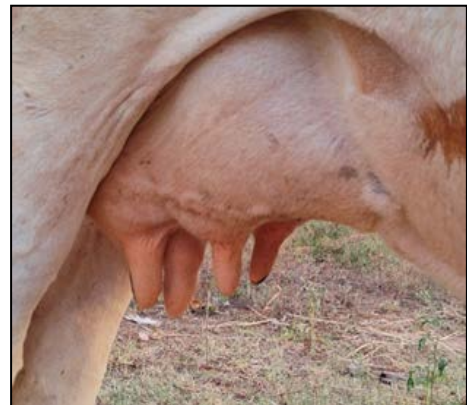
**Fig 2:** 60% of lesions reduced in udder (Day 6)



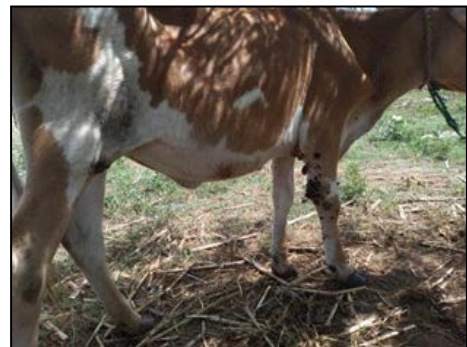
**Fig 3:** 70% of lesions reduced in udder (Day 9)



**Fig 4:** 85% of lesions reduced in udder (Day 14)



**Fig 5:** Completely reduced wart lesions in udder (Day 28)



**Fig 6:** Papillomatosis lesions noticed in fore limbs, hind limbs and body coat (Day 0)



**Fig 7:** 50% of lesions reduced in fore limbs, hind limbs and body coat (Day 7)



**Fig 8:** 60% of lesions reduced in fore limbs, hind limbs and body coat (Day 14)



**Fig 9:** Completely reduced wart growth in fore limbs, hind limbs and body coat (Day 28)

### Conclusion

Bovine cutaneous papillomatosis can be effectively cured by combination of Anthiomaline and autohemotherapy injections.

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