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## Case study on papillomatosis in a calf and its therapy

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### Abstract

4 months old crossbred Jersey calf was presented with a history of multiple growths around the eyes and upon physical examination and history the case was diagnosed as cutaneous papilloma and was treated using autohemotherapy at weekly intervals for 4 weeks and Thuja ointment twice daily for 4 weeks. After the end of fourth week the warts dried and started to slough off. By the end of eight week all the warts sloughed off leaving light scars at their point of growth.

**Keywords:** crossbred jersey, cutaneous papilloma, autohemotherapy, thuja ointment

### Introduction

Papillomatosis occurs most commonly in cattle, usually benign in nature and characterized by presence of small to medium sized warts which are rough surfaced cauliflower like growths on skin or mucous membranes (head, neck, back, abdomen, udder, perineum, teat and mucosal epithelium of alimentary tract and urinary bladder). The condition is caused by bovine papilloma viruses that infect the epithelial cells of skin or mucous membrane causing hyper proliferation of cells. Bovine papillomatosis is distributed worldwide among cattle but is relatively less common in buffaloes (Jangir *et al.*, 2016) [4].

### Case history

A 4 month old female crossbreed Jersey calf was presented to Veterinary Dispensary, Aripaka, Sabbavaram mandal, Visakhapatnam District, with a history of multiple small nodules of peanut size to lemon sized which are cauliflower like situated around both the eyes. The lesion first started as small peanut size above the right eye and later developed into multiple pedunculated nodules of various sizes in areas around both the eyes in a span of 4 weeks. The owner also reported that calves present in the same herd started to develop warts. The clinical parameters like temperature, heart rate, respiratory rate, pulse are within the normal range. Physical examination of the lesions revealed that they were warts.

### Treatment

There are different treatment options like use of Inj Anthiomaline, homeopathy (Thuja), autogenous vaccine and autohemotherapy (BIRICIK *et al.*, 2003, Ranjan *et al.*, 2013, Kavithaa *et al.*, 2014) [1, 5, 8]. The present case was treated using Thuja ointment and autohemotherapy as this combination resulted in better cure. Accordingly the animal was administered with its own blood. The venous blood was drawn @ 10 ml from the jugular vein by using 18G hypodermic needle in a disposable syringe in that 5 ml each of fresh blood without mixing any material was injected deep intramuscularly on both the sides of the lateral neck region by taking all sterile precautions. The treatment was repeated at weekly interval for four weeks. Thuja ointment was applied topically, twice a day for four weeks along with autohaemotherapy. After third injection, the papilloma growths showed signs of regression. After 8 weeks all the warts were completely sloughed off leaving scars at the site of growth.

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**Fig 1:** At the time of 1st examination



**Fig 2:** At 3rd week-the warts started to become dry



**Fig 3:** At the end of 8th week of line of treatment

### Discussion

Bovine papilloma virus is a chronic contagious proliferative disease characterized by warts or papilloma that occurs mostly in cutaneous form and less frequently in mucosal form (Jelinek and Tachezy, 2005) [3]. Warts are most commonly benign in nature and rarely malignant. They are observed on external surface of body having varying morphological appearance like pedunculate or sessile bearing hard, horny or rough and tough papillomatous structures. The warts occur most commonly around neck, eyelids, teats and lower line of abdomen (Ranjan *et al.*, 2013) [8] but also occur on ears, ear pinnae, head, face, shoulder, limbs, thorax, abdomen, back, axilla, udder, teats and around genitalia or at perineum which occurred predominantly in young animals aged almost 1-3 years. The warts may be grey, dark brown or black in colour which occasionally may slough off in some animals without

any treatment based on the immune status of the animal. Autohemotherapy is a simple low-cost technique in which the blood injected into muscle acts as foreign substance that is rejected by the reticulo-endothelial system leading to increased production of macrophages from the bone marrow which causes degenerative changes in the warts (Ranjan *et al.*, 2013) [8]. Autohemotherapy should be undertaken at weekly intervals as the blood injected into muscle gets reabsorbed in 5-7 days. Thuja is a homeopathy medicine obtained from leaves of *Arbora vitae* or *Thuja occidentalis*. Thuja is best known for its ability to treat skin ailments which include warts, oily skin, dry skin, sensitive or itchy eruptions, nail fungus and hemorrhoids in humans. It has antiviral action and also stimulates cytokine and antibody production and activation of macrophages and other immunocompetent cells either directly or indirectly (Shakoore *et al.*, 2013) [9].

In the present case, autohemotherapy resulted in regression of papilloma growths after fourth injection. These findings are in accordance with the findings of Hedge (2011) [2], Leishangthem *et al.* (2008) [6] and ÖZSOY *et al.* (2011) [7]. However, from the observations in present case it is concluded that, autohemotherapy along with Thuja ointment could be effectively employed to treat papilloma warts in a crossbred Jersey calf without the need for surgical intervention.

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