

Vulvar Squamous Cell Carcinoma In A Horse : A Case Report

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Abstract

Formalin fixed tumor mass from vulva of mare was received from TVCC, PGIVAS, Akola for histopathological examination and diagnosis. Clinical examination findings reported were large ulcerated, neoplastic mass located at the unpigmented areas on the mucocutaneous junction of the vulva. Histopathologically, the ulcerated growth showed irregular cords of neoplastic squamous epithelial cells surrounded by connective tissue stroma. The tumor showed formation of keratin pearls in the centre of cords and presence of few mitotic figures. The neoplastic squamous cells showed large hyperchromatic nuclei. On the basis of histopathological examination, the present case was diagnosed as vulvar squamous cell carcinoma.

Key words: Horse, Squamous Cell Carcinoma, Vulva

Introduction

Squamous cell carcinoma (SCC) represents the most common malignant tumor and the second most common cutaneous neoplasm in horses, accounting for about 30%. It can develop at any location on the skin, it occurs most frequently in nonpigmented areas in horses 12 years and older, especially on the head and external genitalia. Although only 13% of mucocutaneous squamous cell carcinoma involves the external genitalia (Taylor and Halderson, 2012). In all species, squamous cell carcinoma may occur in young animals, but the incidence increases with age (Ginn *et al.*, 2007, Goldschmidt and Hendrick, 2002, Meuten, 2002).

Methodology

A mare approximately 9 years old was presented at Teaching Veterinary Clinical Complex, PGIVAS, Akola. Clinical examination findings reported were large ulcerated, neoplastic mass located at the unpigmented areas on the mucocutaneous junction of the vulva. Biopsy material from vulva of horse was

collected/received from TVCC. After collection, tissue mass was preserved in 10% buffered formalin for his to pathological studies. After fixation, tissue was cut into small sections with thickness of 2-3mm and embedded in the paraffin by standard procedure. The paraffin embedded tissue was cut into 4- 5 μ thick sections and stained with haematoxyl in and eosin as per conventional procedure.

Results and discussion

Histologically tumor showed islands/cords of invasive, neoplastic squamous epithelial cells surrounded by marked connective tissue proliferation (Fig.1). The tumor showed keratinized surface epithelium with dermis and epidermis showing sheath of epithelium The neoplastic cells were large with pleomorphic, hyperchromatic nuclei showing mitotic figures (Fig. 2). The nuclei varied in shape from spindle to round. Cords of neoplastic squamous cells showed mononuclear cell infiltration in between the cords (Fig. 3). On the basis of histopathological examination, the present case

was diagnosed as vulvar squamous cell carcinoma. SCC is a malignant tumour of epidermal cells in which the cells show differentiation to keratinocytes (Goldschmidt & Hendrick, 2002). In equines, SCC represent the most common malignant tumor type in the mucocutaneous junction. Although only 13% of mucocutaneous squamous cell carcinoma involves the external genitalia as reported by Taylor and Haldorson, (2012). Vulvar forms of squamous cell carcinoma occur almost exclusively in older mares. Smith *et al.*, (2009) reported a case of squamous cell carcinoma in 25 years old mare. The vulvar forms are usually proliferative when they develop within the vestibule and ulcerative when they involve the lips of the vulva (Knottenbelt, 2003). Aetiology for the present case of vulvar squamous cell carcinoma might be due to long exposure to ultraviolet light, unpigmented epidermis (Ramos *et al.*, 2007) or chronic skin irritation (Smith *et al.*, 2009) but the etiology of equine SCC is still unclear. The potential invasive nature of this neoplasm is less studied in case of large animals. These tumors can seriously compromise the welfare of affected horses causing considerable financial losses to the owners.

References

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Captions of the figures:

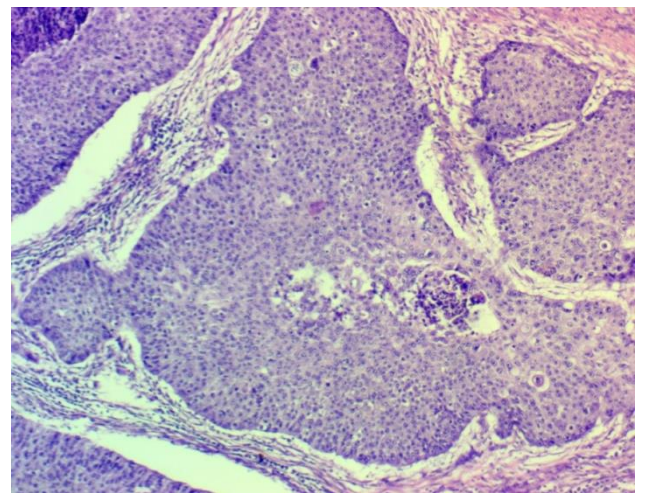


Fig. 1: Well differentiated cords of neoplastic squamous cells surrounded by marked connective tissue proliferation. H&E ×100

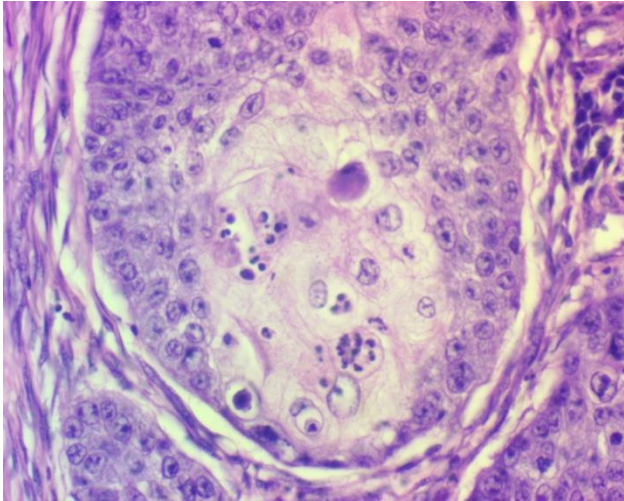


Fig. 2:The neoplastic cells showing pleomorphic, hyperchromatic nuclei with mitotic figures.H&E×200

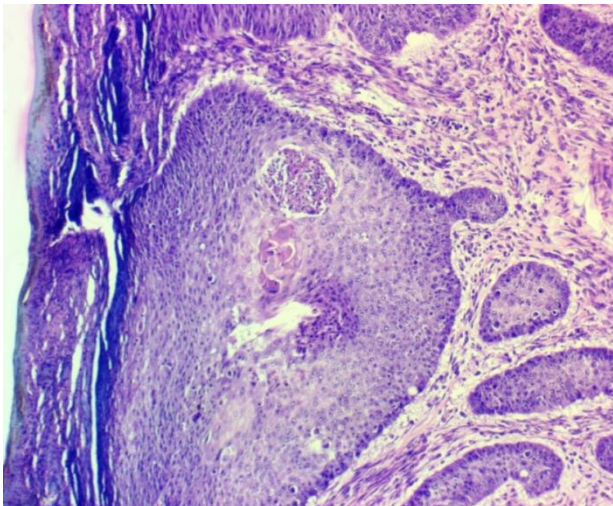


Fig. 3.Cords of neoplastic squamous cells with mononuclear cell infiltration in between the cords.H&E ×100.