



(RESEARCH ARTICLE)



Preputial melanoma in a crossbred gelding

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Abstract

Segmental posthetomy (sheath ablation) by removing an extensive circumferential segment of the internal preputial fold and extended proximally to the preputial orifice with subsequent end to end anastomosis of the distal and proximal skin edges was satisfactory as a salvage operation. The excised segment was loaded with heaviest melanotic nodules. The horse regained uneventful normality.

Keywords: Grey horses; Melanoma; Prepuce; Tumors; Posthetomy

1. Introduction

Equine melanoma is more prevalent in horses (Johnson, 1998). It represents 20% of all equine tumors (Van Den Top et al, 2008) and estimated to occur in approximately 80% of ageing grey horses (McFadyean 1933; Knottenbelt et al, 2015; Phillips and Lembcke, 2013). The genetic link between the grey coat color and the higher incidence of melanotic tumors in grey horses has been stated (Rieder et al, 2000; Rosengren et al, 2008). The perineum, ventral tail and external genitalia have been reported as the most common involved locations (MacGillivray et al, 2002; Garvican et al, 2007). Penile and preputial melanomas have more metastatic aggressive nature with subsequent serious impact on the health and entail early surgical intervention. This report describes a rescue operation of segmental posthetomy (Circumcision or reefing) in a 14-year-old crossbred grey gelding with massive preputial melanoma.

2. Clinical case description

A 14-year-old crossbred grey gelding was referred to the veterinary horse clinic of military veterinary hospital with a mass over his penile sheath for evaluation and difficult urination (Fig.1). Physical general examination revealed normal body rectal temperature, breathing and cardiac auscultation. Examination of the external genitalia showed a proliferative nodular black pigmented masses involving the external, internal preputial fold and ring, some of the masses were ulcerated and infected. There were other smaller black pigmented nodules involving the inguinal region and the base of the tail. Regional lymph node enlargement was not detected externally by palpation or ultrasonography. By administering xylazine (0.5 mg/kg IV), the penis could be withdrawn and extended through the preputial ring to assess the normal telescopic function of the prepuce.

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Figure 1 Preputial melanoma in a 14-year-old crossbred gelding

2.1. Preoperative preparation

This stage included the IV administration of Cefazolin 20mg/kg (Cefotax-Epico, Egypt) and Flunixin meglumine 1.1 mg/kg (Meglugin -Adwia, Egypt). General IV anesthesia (triple-drip-GKX), formulated by adding 1000 mg of ketamine and 500 mg of xylazine to a liter of 5% guaifenesin (Greene et al., 1986). The combination was administered by continuous infusion to effect up to a rate of 2 ml/kg/hour. Catheterization of the urethra was applied and the penis was extended by traction after making a gauze snare around the base of the glans penis. A rubber tourniquet was fixed at the base of the penis. The penis, prepuce and all the vicinity around were cleansed and aseptically prepared.

2.2. Surgical Technique

A circumferential preputial (segmental posthetomy-sheath ablation) including all the involved area after was made by two parallel incisions. The distal incision at the margin between the inner lamina of the internal preputial fold and the penile body while the proximal incision was at the level of the external preputial ring. The preputial integument carrying most of the melanotic nodules was peeled and excised. The excised mass was voluminous with an area measured 24X16 cm. End to end anastomosis by suturing the skin and the subcutis with absorbable Vicryl-0 suture material in a simple interrupted pattern. The rubber tourniquet and catheter were removed (Fig.2).



Figure 2 Extensive segmental prosthetomy

2.3. Post-operative care

PO management included continued administration of IV Cefotax 10 mg/kg BID and Flunixin meglumine 1.1 mg/kg SID for 3 days. Urination was comfortable. Follow-up consultation for one month PO confirmed complete wound healing and regained normality.

3. Discussion

Circumferential extensive preputial posthetomy proved successful as a salvage operation for surgical debulking of massive preputial neoplasia in horses for purpose other than breeding. Other authors have similar results (De Amicis et al., 2020; Garvican et al., 2007; Doles et al., 2001; Schumacher, 1999). Despite the surgical excision may be a reasonable treatment in early cases, the risk of regrowth after surgery may exist (Rowe and Sullins, 2004; Moore et al., 2000). Follow-up consultation was for one month which passed uneventful. However, the prognosis of such lesions is usually questionable, considering the malignant nature of the tumor. In this respect and according to (MacGillivray et al., 2002)) have concluded that metastatic melanoma should be considered a differential diagnosis of almost any grey horse that present for veterinary evaluation. Moreover, (Garvican et al., 2007) believed that a basic database, including abdominocentesis and ultrasonographic examination of the abdominal viscera, should be considered for all cases of melanoma that present for surgical evaluation prior to resection, to investigate the possibility of metastatic spread before extensive surgical procedures are embarked upon to avoid pointless and costly operation where metastasis is already present.

4. Conclusion

Segmental preputial extensive prosthetomy can be easily performed and strongly indicated for penile sheath neoplasia with satisfactory cosmetic and functional results.

Compliance with ethical standards

Disclosure of conflict of interest

The authors declare that no conflict of interests.

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