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A case report: Circumscribe, ulcerated, necrotic perianal adenoma adjacent to the rectal opening in a castrated dog

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Abstract
Perianal adenomas are the benign tumour of sebaceous glands located in the perianal region of dogs. Theses androgen dependant neoplasams are mostly seen in the intact male dogs while androgen independent adenocarcinomas, metastatic in nature, are observed in castrated or in female dogs. In the present study, management of a rare case of perianal adenoma causing in a male dog which had undergone castration long ago was described.

Keywords: Snail, bovine, porcine, physicochemical properties, mucin, mucoadhesives

Introduction
Cutaneous neoplasms are common in aged dogs where as 30% neoplasms are of cutaneous origin and one third of these neoplasms are of benign in nature (Brodey, 1970; Strafuss, 1985; Halliwell, 1990; Kaldrymidou *et al*., 2002) [3, 13, 5, 6]. Perianal glands are normally non-secretory sebaceous glands which are found near the anus, prepuce, tail, hind limbs and trunk of dog (Maita and Ishida, 1975) [8]. In dogs, among all perianal tumors especially adenomas are very common, around 80% are only adenomas which occur in male and 3rd most common tumours, while it is rare in female dogs (Natasa *et al*., 2005; Gross *et al*., 1992) [9, 4]. Perianal adenomas are benign in nature known as hepatoid tumor because of histopathological similarity to hepatocytes, seen in intact males (Petterino *et al*., 2004) [10]. Castrated male or female dogs are mostly suffered from malignant perianal adenocarcinoma has generally does not have hormonal dependency (Vail *et al*., 1990; Withrow, 1996) [16, 18], females were more affected by apocrine adenocarcinoma (Bidur *et al*., 2007) [2].
Perianal gland adenomas, adenocarcinomas are all have receptors for testosterone suggestive of androgen dependency and leads to more susceptible to intact male dogs (Kaldrymidou *et al*., 2002; Sanja, 2005; Pisani *et al*., 2006)[6, 12, 11]. Intact male dogs especially aged, are three times more susceptible than female with some predisposing breeds are the beagle, bulldog, Siberian Husky, Cocker Spaniel, Pekingese, and Samoyed. It can develop ventral midline from the perineum to the base of the skull, the dorsal and ventral tail but 90% are found in the perianal region and in the skin of the lumbar and sacral regions (Withrow, 1996; Merck Veterinary Manual) [18, 1].
Endocrinopathies, seborrhoeic diseases may also resposible certain tumors which are increase as age proceeds (Halliwell, 1990) [5]. Lesions are vary in size, nodules to large ulcerate, hemorrhagic, seldom it compress the anal canal leads to difficulty in defecation (Devia *et al*., 2012) [7]. Castration is the permanent solution which can prevent future development of adenoma should revaluate any presence of low-grade hepatoid gland adenocarcinoma, also excision upon tumor and castration at the same time prevent future recurrence. Administration of antiandrogen drugs can help unresponded case to castration or estrogen therapy (Merck Veterinary Manual) [1].
Rare instances these tumours may affect the normal bowel movements and hence defecation process leading to health problems in dogs and may become lethal due to constant constipation subsequent toxaemia (Devia *et al*., 2012) [7]. In the present case, a castrated animal suffered from a tumerous growth in the perianal region, suffered from chronic constipation, inappetance and along with secondarily infected, lacerated, ulcerated edges of tumour mass and its surgical management.

Anamnesis

A castrated male dog, 14year old, 16 kg weight, non-descript Cross, was presented in a Veterinary Dispensary of Bangalore with a history of overgrowing mass observed months ago in the perineal region of dog, near rectal opening. Animal was being castrated when animal was 6 years old. This dog had difficulty in passing stool since 15 days, had intermittent abdominal contraction with inappetance and discomfort, mild dehydration. On external examination of the animal revealed presence of a irregular circumscribed shaped big hard mass 6 cm x 5.5cm x 3.2 cm in dimension just ventral to the external opening of rectum was partially covered by skin, ulcerated, lacerated and necrotic spots overall mass along with blood oozing out from the peripheral part of the mass along with blood stains in the perineal region. On per rectal examination revealed, presence of mass that extended towards anterior direction of anus which putting pressure upon the rectal wall leads to difficulty in normal defecation.

Materials & Method

The surgical operation was done as per owner decision and consent. Administration of intravenous fluids, Inj. RL 500ml, @ 10-20 ml/kg body weight, Inj. DNS-500ml @10-20ml/kg body weight for correcting the dehydration, along with Inj. Polybion, 2 ml I/M (Multivitamins; Merck Biopharma, Darmstadt, Germany), Inj. Pan-D, 40mg, I/V.

Surgical removal of the mass was done under general anaesthesia. Premedication was done using Atropine sulphate @ 0.02 mg/kg body weight, I/M (Atropine Sulphate: Paksons Pharma Pvt. Ltd. Delhi, India) followed by induction with Propofol @ 10mg/kg body weight (Neorof, Neone laboratories limited, Mumbai, India) and subsequently maintained by cocktail of Propofol and ketamine (1:1), Propofol @5-10mg/kg body weight (Neorof; Neone laboratories limited, Mumbai, India) and Ketamin @ 5- 10mg / kg body weight (iket injection, Bharat Parenterals Ltd, Gujrat, India).

Following use of endo-tracheal intubation the incision place at the skin around the stalk of the mass. During separation of the subsequent layers of the tissue i.e subcutaneous, muscle the ligation has placed in every opening of blood vessels by polyglactin 910 (No.1-0) (Relyon; MCo Hospital Aids Pvt Ltd, Hubli, India). The muscle subcutaneous layer were closed by polyglactin 910, No-0 (Relyon; MCo Hospital Aids Pvt Ltd, Hubli, India) by continuous interlocking, following skind was sutured by using monofilament plyamide, No- 1 (Relyon; MCo Hospital Aids Pvt Ltd.) simple interrupted pattern. The animal recovered from the anaesthesia was uneventful without any complication and applied topical application of povidone iodine ointment and bandaged.

Animal was given Cefotaxim (Alkem Laboratories Ltd. Mumbai, India) @ 20 mg/ kg body weight I/M, Inj. Chromostat, 2ml, I/M stat., Inj. RL 500ml, @ 10-20 ml/kg body weight, Inj. DNS 500ml @10-20ml/kg body weight, Inj. Supridol @2-4mg/kg body weight I/M (Neon Laboratories Ltd. Mumbai, India) and Inj. Polybion, 2ml I/M, (Multivitamins; Merck Biopharma, Darmstadt, Germany) once daily for five days. Advised to monitor the bandage, sutures and use of mouth gags or Elizabethan collar to prevent unwanted licking or biting the perineum by dog itself which may leads to further complication. Animal visited the dispensary after two week for check up and animal was active, recovered successfully.

The mass was sent for histo-pathological analysis and histological findings revealed presence of large sized polygonal shaped eosinophilic centrally vesicular nucleus, small nucleoli without nuclear atypia with granular cytoplasm. Areas with cystic degeneration, congested vessels with inflammatory cells were present. There were absence of mitotic figures and necrosis. Histological analysis suggested benign tumour of sebaceous glands i.e perineal adenoma.

Discussion

In male dogs, neoplasm surrounding perineal regions are mostly tumors of sebaceous gland are of hormone dependant, rarely visible in castrated dogs, 4.5 times more chances of being adenoma rather carcinoma (Wilson and Hayes, 1979) [17]. Present study the excision of mass only done as treatment of perianal adenomas because animal was neutered 8 years ago, and generally suggested that, castration and surgical excision of the tumor mass should be done in intact males and completeness of surgery for cuteneous tumor is determined by histopathology (Wilson and Hayes, 1979; Thomas and Fox, 1998; Vail and Withrow, 2001) [17, 14, 15]. In present case, there might seeded before castration and following years due to endocrinopathies, this leads to development and it is also been suggested that, castration alone cannot prevent development of perineal adenomas some instance (Vail *et al*., 1990; Halliwell, 1990) [16, 5]. Even though tumor grow in the influence of hormones, other perspective reasons that have impact on tumour growth are close exposure to carcinogens or constant accumulation though out their life, alteration in the immune system due to age (Grubeck-Loebenstein and Wick, 2002; Arda *et al*,, 2014)

As the animal already been castrated eight years ago thus treatment has followed administration of anti-androgen drug as it also been suggested by Pasini *et al*., (2006) [11]. Estrogen therapy can leads to severe myelosuppression which limits its use (Thomas and Fox, 1998) [14]. This case also represents the rare instances where perianal adenomas obstructing the normal physiological expulsion of faces through rectum which may in turn causing severe constipation and subsequent toxaemia leads to death of the animal which agreement with Devia *et al*., (2012) [7].

Fig 1: Perianal tumour just ventral to the anal opening

Fig 2: Tumour Mass

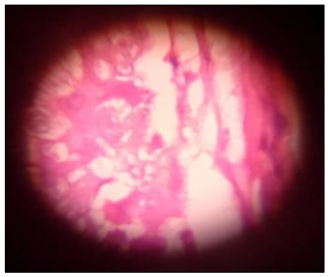

Fig 3: Histopathological Slide

Conclusion

This case is rare case as animal was being castrated and even though developed adenoma which till now not been reported, also animal has physiological disturbances due to this abnormal growth. This really a unique case need to study intensively in future to find out the other reasons which helps to develop such tumors and may cause harm to the animal kingdom.

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