

MAMMARY ADENOCARCINOMA IN A SPITZ DOG- A CASE REPORT

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SUMMARY

A case of mammary adenocarcinoma in a Spitz dog is presented. Clinically the growths involved the last pair of posterior mammary gland and were found to be non-pedunculated, hard and oval shaped. Histopathological examination of growth revealed neoplastic epithelial cells arranged in the form of clusters or nests forming acini or gland like structures. The malignant cells appeared as tightly packed masses of cells with spherical to oval nuclei, pleomorphism, hyperchromatic nuclei with presence of mitotic figures.

Key words: Mammary adenocarcinoma, Spitz dog

Cancer is one of the most common causes of death in canines (Schneider, 1970; Jemal *et al.*, 2008). Among the different tumors, mammary tumors are the most frequently encountered neoplasms in bitches (MacEwen and Withrow, 1996). Occurrence of malignant form of mammary tumors is more frequent than the benign ones in dogs. The incidence of adenocarcinoma in canines seems to be age dependent as bitch upto 2 years of age rarely shows this tumor. However, there is a sharp increase in the incidence of malignant tumors of mammary gland after 5-6 yrs of age with peak incidence between 8-12 years of age (Brodey *et al.*, 1983; Rungsipipat *et al.*, 2003). In this report, a case of mammary adenocarcinoma in a Spitz dog is reported.

The present communication deals with a case of adenocarcinoma in an eight year old Spitz bitch. The animal was brought to the Veterinary Clinics of the College with the complaint of swelling in the inguinal region for the past four months. On clinical examination, the growths involving the last pair of posterior mammary gland were found to be non-pedunculated, hard and oval shaped. Radiological examination revealed tumorous growth, hence it was planned to remove the growth surgically.

The animal was kept on overnight fasting before surgery. Atropine sulfate @ 0.7 mg as a total dose and medetomidine @ 20 mg/kg body weight were

given by the intramuscular route. The site was prepared for aseptic surgery. After 15 minutes, propofol @ 4.5 mg/ kg body weight was administered intravenously to achieve general anesthesia. A continuous drip of 5% dextrose saline solution was given intravenously during the surgery. The tumorous growth was excised and a part of the growth was preserved in 10% formol saline solution for histopathological examination. Post-operatively, the dog was administered antibiotics, anti-inflammatory drugs for seven days in recommended doses. The dog recovered in a time

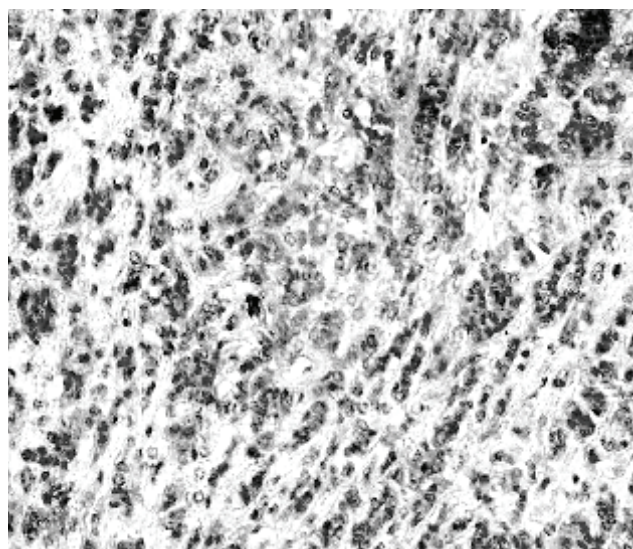


Fig 1. Microphotograph of mammary adenocarcinoma showing pleomorphic neoplastic cells in acini like formation.

(H. & E.x 400)

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period of 12-14 days without any complication.

The tumourous growth was about 3 cm in diameter, oval in shape, nodular, brownish grey in color and involved last pair of posterior mammary gland. Histopathological examination of growth revealed neoplastic epithelial cells arranged in the form of clusters or nests forming acini or gland like structures (Fig. 1). The malignant cells appeared as tightly packed masses of cells with spherical to oval nuclei, pleomorphism, hyperchromatic nuclei with presence of mitotic figures. Krithiga *et al.* (2005) also reported papillary adenocarcinoma in a 12 years old Spitz bitch with similar histopathological features. Theilen and Madewell (1979) reported that bitches are susceptible to mammary adenocarcinoma during old age. The last two posterior pairs of mammary gland are affected quite frequently as they are more prone to trauma (Sastry, 1983). The reoccurrence of the tumor was not observed during the

follow up period of six months, so it can be concluded that surgical excision of the malignant mammary tumors i.e. adenocarcinoma in bitches could be quite useful in treating mammary tumor cases.

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