



Mammary Gland Tumor In Cat And Therapeutic Approach: A Case Report

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Abstract

This report describes a case of mammary gland tumor in a 1-year-old female cat using a mastectomy approach. The tumor was located on dexter side of mammae. Blood analysis showed good condition of the patient and ready for surgery. Mastectomy was conducted to remove the mass, and the tumor size was measured 7x5x4 cm with solid appearance. The cat was given antibiotics to prevent infection, and the wound dried in five days.

Keywords: Feline, Mammary tumor, Mastectomy, Therapeutic.

Background

Tumor or neoplasm is one of the most emerging issue in human and animal which need to be handled appropriately. The cause of this disease is varied and complex that difficult to handle. It does not show any clinical symptoms in early stage and require regular check up (Soedjono, 2009). Generally, mammary gland tumor is treated with chemotherapy to avoid invasive approach. Unfortunately, chemotherapy itself or in combination with herbal medicine still can not terminate the tumor cell growth. Therefore, mastectomy is the best treatment so far for mammary gland tumor.

Feline mammary gland tumor has been recorded as the most frequent diseases after haemopoetic and skin tumor. As many as 80 percents of mammary gland tumors become adenocarcinoma, which further develop to metastase in lungs, limphoid tissue, and liver (Hughes and Dobson, 2012). This kind of tumor is primarily influenced by age, nutrition status, inbreeding behavior, obesity, lack of vaccination, and administration of certain

medicine. Polton (2009), reported other factors such as genetic, level of hormon in blood, virus infection, UV light, carcinogenic substances, and environment that contribute to triggering this disease.

In cats, mammary gland tumor is more aggressive than in dogs, it is 80% to 90% likely to be malignant, with the majority of these tumors being adenocarcinomas. The cells are more related to progesteron receptor and if cats are treated with progestational drugs, the cells will become mammary carcinoma. The size of tumor ditermines the prognosis status; the smaller size of tumor, the longer free intervals and survival times (Ehrhart, 2008; Morris, 2013).

Yulestari *et al.* (2014) reported the malignancy level of histopathological lesions in canine mammary gland tumor in Bali. they examined 22 histopathological samples of canine mammary gland tumor. However, the reporting case of mammary tumor in cat is very limited in Indonesia. On march 2017, the animal hospital of Syiah Kuala University in Banda Aceh, alleged a case of gland mammary tumor suspect in a

thirteen month old female cat that has been given birth. In Syiah Kuala Animal Hospital (SKAH), the rise of this neoplastic disease requires continuous establishment from oncology department. This report is aimed at translating field case into relevant scientific information that may be used as a basis for experimental studies (Salas *et al.* 2015).

Results and Discussion

A one year old female persian cat was examined at Syiah Kuala University Animal Hospital in March 2017. The cat was brought to hospital with mammary gland tumor Haemathology analysis was caried out to discover the cat health condition.

Signalement and medical history of the cat were evaluated. Physical examination was performed, supported by laboratory test including complete blood count (CBC). Regional lymphonodus palpation and ultrasonography was conducted on abdomen area. In order to remove tumor, mastectomy procedure was applied. Before surgery, the cat was given atrophine sulfat as pre medication with dosage 0.04 mg/kg (bw) subcutan.

Enlarged nodules were found on dexter side of mammary gland. There was anatomy and pathological changes on both caudal side. Therefore, the cat was diagnosed with mammary gland tumor, and mastectomy was necessary to remove tumor tissue. Haemathology analysis was caried out to discover the cat health condition. The result was provided in Table.

Parameter	Result	Normal value	Description
WBC	17,0 x 10 ⁹ /L	5,5-19,5 x 10 ⁹ /L	Normal
RBC	7,13 X 10 ¹² /L	6-10 x 10 ¹² /L	Normal
HB	9,8 g/dL	9,5 – 15 g/dL	Normal
Hematocrite	32,7 %	29 – 45 %	Normal
MCV	45,9 FL	41,0 – 54 FL	Normal
MCH	13,7 pg	13,3 – 17,5 pg	Normal
MCHC	29,9 g/dL	31 – 36 g/dL	Normal
Platelet	622 x 10 ³ /μL	230 – 680 X 10 ³ /μL	Normal
Lymphosit %	27,9 %	20 – 55 %	Normal

Before surgery, the cat was given atrophine sulfat as pre medication with dosage 0.04 mg/kg (bw) subcutan. After 10 minutes anestesi (zoletile) was administered intramuscular with dosage 10-15 mg/kg (bw). During anestesi stadium, heart rate and respiration was monitored every 5 minutes. The tumor image is presented in figure 1.

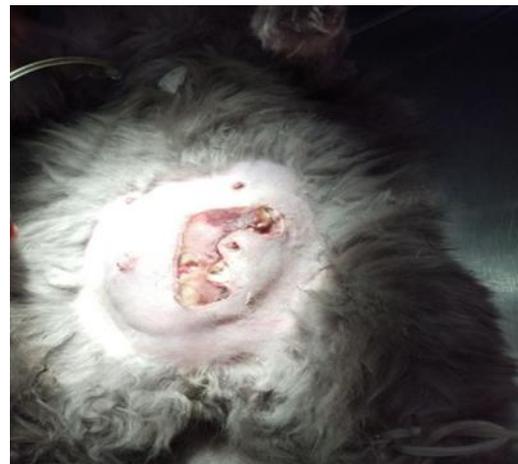


Figure 1. Mammary gland tumor in feline

Incision was conducted on caudal side of mammary gland, blood vessel was ligated using bipolar cautter. The area around the tumor was cleaned from lipid tissue and tumor was removed by using forceps and metzembaum scissor. The tumor size was 7x5x4 cm with solid appearance. Combination of penicilline and streptomycine was sprayed around the incision area and the wound was sutured using chromic catgut size 2/0 metric by subcuticular. Simple interrupted stitching was used to tight up the wound using silk 2/0 metric. On the outside of the wound

iodine tincture 3% and gentamycine 0.1% were rubbed to minimize secondary infection. The surgery process is provided in figure 2.



Figure 2. the removal process of mammary gland tumor in feline

After surgery, elizabeth collar was covered to avoid scratching and biting. Medication namely meloxicam, clindamycine, vitamine C and calnex were prescribed. Three days post surgery the wound has not dried completely and still swollen. Five days later, the wound was dried and recovered beautifully. The scar was almost dim entirely (Figure 3).

Seixas *et al.* (2011), Munson and Moresco (2007), Misdorp (2002), and Mayr *et al.* (1990) stated that mammary tumor in cat has several causal agents, and the most common is tubulopapillary carcinoma. The incidence of this disease increased with age and most cases occur in animals over 8 years old, as in other malignant mammary gland tumors. Mammary gland carcinoma in

cats tends to be aggressive and locally invasive, and in many occasions metastasizes to other organs (Avci and Toplu, 2012). In this case, further observation should be conducted to find out whether the tumor was metastasized to other tissues.



Figure 3. the recovery process after surgery

In recent years, the case of mammal or other tissue sarcomas and/or carcinomas in cats and dogs is increased significantly, probably associated with exogenous and endogenous factors such as age, environmental pollutions, viruses, helminths and other carcinogenic substances (Misdorp 2002, Munson and Moresco 2007). However, in this case, the cause of the tumor was unknown, probably related to environmental pollutions.

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