

DOI: 10.21767/2572-5459.100011

Careful Surgery, Management and Treatment of Feline (Cat) Breast Cancer

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Rec date: Dec 13, 2016, Acc date: Jan 19, 2016, Pub date: Jan 25, 2016

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Abstract

Objective: The aim of present study investigates the advanced breast cancer (malignant mammary tumors) surgical removal, effects of drugs and improving the quality of life. The terms of tumor and cancer are sometimes used interchangeably which can be misleading, there are two type of tumor, benign and malignant, but all tumors are not a cancerous.

Methods: The study was conducted in Richmond Crawford Veterinary Hospital, Karachi, Pakistan (RCVH). A 13-year old female Household Pet Cat about 2 kg body weight was presented with the barest swelling complaint in a Richmond Crawford Veterinary Hospital, Karachi. There was partial reduction in swelling the right nipple, reaped growth of tumors, ulceration, oozing yellowish fluid. After the tentative clinical and laboratory diagnosis the excessive growth of tumor was removed surgically. Then we applied available medicines like injection Adriamycin 1mg/kg I/V, syp- cyclophosphamide 0.2mg/kg, and syp- vidayline 2 tea spoons morning and evening, every 24 hours for fifteen days.

Results: And after the fifteen days the cat wound decreased gradually and successfully and improving the quality of life. Then again coming after six months for a checking there were no signs of breast cancer.

Conclusions: For the better recovery of barest cancer, we recommended surgical intervention to remove the infected tissues and regularly washed with povidone and provide recommended medicine like injection Adriamycin 1mg/kg I/V, syp-cyclophosphamide 0.2mg/kg, and syp-vidayline 2 tea spoons every 24 hours for fifteen days.

Key word

Breast cancer; Feline; Diagnosis; Mammary gland; clinical Treatment response

Introduction

Mixed mammary tumors and mammary sarcomas are rare, and sarcomas appear to be low metastasize [1]. Feline mammary complex carcinoma and adenocarcinoma are one of the most common feline neoplasms and represent an important cause of mortality [2]. It is caused at all age's stage of feline, canine and all types of animal and human beings. There are two main types of tumors, benign and malignant. A malignant mammary tumor is very quickly spread to lateral region of lymph nodes, and sites of local metastases are dictated by lymphatic drainage patterns. The malignant tumor rapidly spread in thoracic mammary gland (cranial and caudal gland), malignant tumor is also known as cancer [3,4]. Cancer is a group of diseases involving abnormal cell growth with the potential spread to other portion of the body. Benign tumors do not spread to other body portion, and this all tumors are not a cancerous [5,6]. Mostly the feline mammary tumors are malignant tumors, the ratio or percentage of malignant mammary tumours is higher in cat (86%) as compared to dog (42%) and the histology of feline mammary tumors is closer to that in human breast cancer [7].

Although there are many kinds of cancer, all cancers start because abnormal cells grow out of control. There are so many different types and different stage of cancer can be having very differently. For example, Breast cancer, lung cancer and skin cancer are very different diseases. They grow at different rates and respond to different treatments [3,5]. Untreated cancers can cause serious breast cancer is the most frequent malignancy among the all animal in the world [8]. Inflammatory breast cancer may also create skin changes. The cancer cells block lymph vessels, causing redness, swelling, and dimpled skin. In some cases, red or thickened skin around the

breast is the first sign of breast cancer [9]. These factors start form abnormal function of the genetic changes in a cell (deoxyribonucleic acid damage). Cancer can be detected by certain signs and symptoms or screening tests and cell or tissue biopsy showed the DNA and RNA position [3,9]. The cancer stage and test results are very important for a prognosis, because cancer has four different stages e.g, stages 0 "in situ" that stage cancer position is started, stage I is also now is localized cancer, stage II and sage I is a similar but stage II is large and two centimeters, but not larger than five centimeters, stage III is called regional spread in lymph nodes and stage IV is also called distant spread cancer. After the conformation of this stage, the doctors has used those stage ways and choosing a base treatments option [6]. The aim of present study to investigates the advanced breast cancer (malignant mammary tumors) surgical removal, effects of drugs and improving the quality of life.

Cases and Methods Section

History and clinical examination

The study was conducted in Richmond Crawford Veterinary Hospital, Karachi, Pakistan. A 13-year old female household pet cat about 2 kg body weights was presented with the right breast swelling complaint and the owner was providing milk and meat in diets. The owner comments that when we woke up early in the morning and observed the cat abdominal region with swollen and was unable to eat and drink. The owner was cat brought to Richmond Crawford Veterinary Hospital; Karachi, Pakistan, then one doctor checked the body temperature and other physical examination then recommended the following medicine e.g syp-brofine, syp-Augmenteon and syp-vidayline 2 tea spoon morning and evening for fifteen days. After fifteen days the owners bring a cat again the cat abdominal region more swelled and mead a wound.

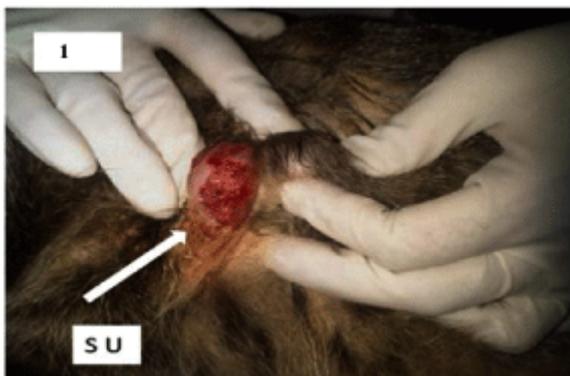


Figure 1: Swelling and Ulceration. Figure 1 shows swollen and ulceration of the tumor before surgery. (SU, Swelling Ulceration).

Then Dr. Meena Memon and other staff again checked the clinically examination, body temperature 104 F, nipples appear to be red and swollen, oozing yellowish fluid, changes the

lump shape or size, difficulty eating, loss of appetite rapid growth of tumors, ulceration, painful, and infection with frequent discharge and drainage (Figure 1). Then these doctors determined the feline breast cancer then again for a conformation recommended Biopsy.

Biopsy test

Initial biopsy fixed for a histological evaluation. We cut the small tissue samples about 2cm thick for a routine histopathological evaluation, then this samples we put in 10% buffer formalin (10:1) formalin to tissue ratio, [10,11]. And send this sample to Agha Khan Medical Laboratory, Karachi, Pakistan for description of the histological examination and determined the grade of the tumor malignancy. The biopsy specimen examination is a critical component to assessing prognosis and batter options for a treatment.

Surgical intervention and treatment

All the surgically instruments were sterilized and the site was prepared for surgical intervention. After that, the cat was anesthetized by the injection katamin. And approximately 5.5 cm circular incision made between the two openings to expose the underlying cavity containing a malignant tumor (Figure 2).



Figure 2: During surgery. Figure 3 show surgically incision during the surgery. (SI, Surgically Incision).

The malignant tumor wound was removed by sharp surgical scalpel (Figure 3ab). Afterwards we cleaned the surgical area with help of anti-septic (povidone) solution by applying the cotton swabs [12]. Then the wound was closed by horizontal mattress sutures pattern, using 2/0 chromic catgut [13] (Figure 4). Moreover, the surgery process was completed then we applied the bandage for a protection from flies attack. Then we applied available medicines like injection Adriamycin 1mg/kg I/V, syp- cyclophosphamide 0.2mg/kg, and syp-vidayline 2 tea spoons morning and evening, every 24 hours for fifteen days. And after the fifteen days the cat wound gradually and successfully and improving the quality of life. Then again coming after six months for a checking there were no sign of breast cancer.

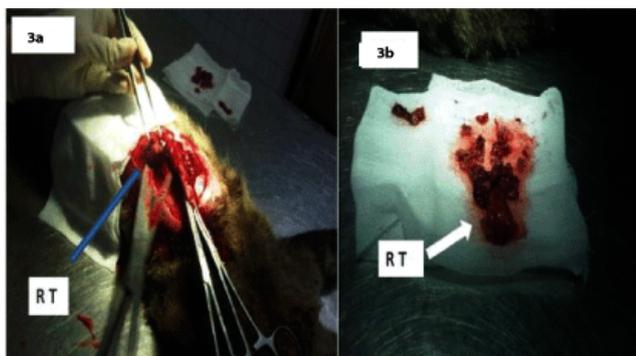


Figure 3ab: During and After surgery. Figure 3ab show Right breast tumor remove during and after surgery.(RT, Right tumor).



Figure 4: After the surgery. Figure 4 show wound suturing after surgery. (WS, wound suturing).

Ethical approval

Ethical Approval for the present study was granted by to Richmond Crawford Veterinary Hospital, Karachi, Pakistan, according to international accepted standards. Approval No: 2014004

Discussion

The present study result that the six month after the Household Pet Cat feeling a good life. Most cats have four sets of mammas, and malignant tumors most commonly arise from the thoracic and inguinal glands. Malignant mammary tumors readily spread to ipsilateral regional lymph nodes, and sites of local metastases are dictated principally by lymphatic drainage patterns. Thoracic mammary gland tumors drain to the axillary lymph nodes, and inguinal mammary gland tumors drain to the superficial inguinal lymph nodes [4]. Alenza et al., [14] reported that many researcher ware used different ways for treatment of cancer but mostly successfully way of surgically remove the mammary gland. Agarwal et al. [6] reported that the terminology of surrounding lumps, tumors and cancer can

be confusion one things to keep in mind is that the word tumor is does not always mean cancer. The cancer malignancy or rapid growth and spread to other part of the body the process known as cancer tumor or malignant tumor then malignant tumor also known as a cancer tumor. Giordano et al. [15] reported that the feline case presented here inflammatory breast carcinoma occurred after surgical excision of malignant mammary tumor, and therefore it can be classified as secondary postsurgical inflammatory mammary carcinoma. In one case, dermal lymphatic emboli were present in the previous biopsy at time of mastectomy (before detection of clinical inflammatory mammary carcinoma), indicating the possible presence of an occult inflammatory carcinoma. Pérez-Alenza et al. [16] similarly, reported that the information provided herein regarding feline inflammatory mammary carcinoma (very low prevalence, only secondary inflammatory mammary carcinoma, frequently associated with wound infection, steroid receptor positivity) indicate that feline inflammatory mammary carcinoma could be useful as a natural model of human inflammatory breast carcinoma, but the findings should be considered with caution. Wolk et al. [17] reported that the malignant tumor we are removed surgically and sutures pattern, using 2/0 chromic catgut. After the suturing was administration of chemotherapeutic agents, and only treatment with antibiotics therapy and anti-inflammatory therapy was given to the owners for a fifteen days.

Conclusions

For the better recovery of barest cancer, we recommended surgical intervention to remove the infected tissues and regularly washed with povidone and provide recommended medicine like injection Adriamycin 1mg/kg I/V, syp-cyclophosphamide 0.2 mg/kg, and syp- vidayline every 24 hours for fifteen days.

Competing interest

The authors confirm that there are no competing interests.

Author's contribution

Assar Ali Shah and Meena Memon, did the surgery and recommended the post-surgical treatment and care management. Azizza Sifeeddein, Alam Zeb Khan. and Anwar Kamal Khan participated in the design of the study, Yuan Xianjun. Liu Qinhua and Mudasir Nazar feeding, care and management. Tao Shao* Revised the manuscript. All authors read and approved the final manuscript.

Acknowledgements

This study was supported by owner and to Richmond Crawford Veterinary Hospital, Karachi, Pakistan.

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