

Spaying in Cat: A CASE REPORT



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Abstract

A 11th month old local non-descriptive breed cat having 2.7 kg body weight was brought to Teaching and Training Pet Hospital and Research Center (TTPHRC), Purbachal, Dhaka, Bangladesh. The owner wished to spay the cat for birth control. As there was no birth control pill available for animals, we decided to do spaying as a birth control measure. Before spaying, the cat was examined physically e.g. Temperature, anemia, dehydration etc. Ultrasonographic screening was done to know whether the cat was pregnant or not. The surgery for spaying was performed using traditional open method of surgical approach with general anesthesia. The operation was completed successful and cat was suggested to keep in clean squeeze cage to observe for 7 days. It was also suggested to provide antiseptic povidone iodine ointment on the incision site until complete healing. There were no complications during following-up the spayed cat. This operation procedure was very simple, unexpensive and very effective for spaying in cat. The present case study was planned to perform the traditional surgical technique of spaying in cat.

Keywords: spaying, traditional surgical technique, birth control

Chapter 1: Introduction

Spaying is the common term used to describe the surgical procedure known as ovariohysterectomy. It is the tool for birth control by removing ovaries and uterus from a female cat. It is one of the major abdominal surgeries in the veterinary practice. Ovariohysterectomy (OVH) is an irreversible technique (Davis, 2010; Kirsan et al., 2013) which is used for the sterilization of the female animal where surgery was done under proper general anesthesia and sterile operating technique (Virginia et al., 2012). This is usually done by a small incision on her left hand side and can also be done underneath along her midline (Machado et al., 2012). Spaying is done for the prevention of reproduction and making docile the animal. It is also done to protect them from certain diseases (Janssens and Janssens, 1991). Spaying is the most common among elective surgeries (Pollari and Bonnett, 1996). Spaying of cat is recommended before they reach sexual maturity and are able to have kittens themselves. This is normally around the age of four to six months old. The surgery for spaying can be performed using a traditional open approach or by laparoscopic surgery. Open method of spaying is widely available, as laparoscopic surgical equipment costs are expensive. Traditional open surgery is usually performed through a caudal midline incision below the umbilicus. The incision size varies depending upon the surgeon and the size of animal. The uterine horns have identified and the ovaries are found by following the horns to their ends. Some studies were carried out on spaying of cat in Bangladesh previously (Azizunnesa et al., 2017). However, further study is needed to know more detail with improved techniques on spaying of cat. Therefore, this case report is planned to execute and evaluate the traditional surgical technique of spaying of cat and make it as a strong tool of birth control in bitch.

Chapter 2: Objective of the study

1. To perform and evaluate the traditional surgical technique of spaying of cat.

Chapter 3: Materials and Method

3.1 Case history and description

On 3rd August 2021, A local breed female cat is introduced to Teaching and Training Pet Hospital and Research Center (TTPHRC), Purbachal, Dhaka. The cat was 11 months of age and 2.7kg weight was measured in a weighing scale. The owner wanted to do spay the cat to prevent reproduction and making the cat docile. Firstly, general physical examination was done that it had a fair body condition with normal physiological status including pink mucous membrane. Then ultrasonographic screening was performed to know physiological status of that cat. Ultrasonographic examination revealed that the cat was non-pregnant. There found no abnormality on ultrasound.

3.2 Anesthesia and control:

The cat was restrained by both physical and chemical method. The cat was kept under fasting condition for 24 hours. Then sedation was done. For sedation, Xylazine chloride solution (Inj. Xylazine) was used as pre-anesthetic (1 mg /kg body weight). Caudal midline 2cm away from umbilicus, the surgical site was prepared by shaving and cleaning. The surgical site was soaked in tincture iodine. The surgical site was prepared aseptically for operative procedure. The animal was maintained with normal saline intravenously as fluid therapy. Ketamine hydrochloride (10mg/kg body weight) was administered intravenously as general anesthetic.

3.3 Operation procedure:

The surgery was aseptically controlled under general anesthesia. The patient was kept on the operation table and covered with sterilized draper keeping the operative site open. A 1-2 cm long incision was done at caudal midline about 2cm away from umbilicus on the skin. The bleeding was checked by applying gauge pressure and artery forceps. Subcutaneous tissue, muscle and peritoneum were incised sequentially. After completion of incision in all layers, surgeon's index finger was introduced toward the left flank into the abdominal cavity, the uterine horn was identified by fingers and ovaries were found following the horn to their ends. The ovary was grasped between thumb and index finger, withdrawn for ligation. A large opening was made in the broad ligament with fingers to expose the ovarian attachment with its blood vessels. A double ligation of catgut (1-0) was used to ligate ovarian pedicle. The attachment between the ligature and the ovary was removed. After removing one ovary, another one was also removed by similar manner. The body of uterus was withdrawn from the abdomen. The uterine vessels were ligated on each side and separated. Then uterine stump was checked carefully to prevent hemorrhage. Peritoneum, muscle layers and fascia were sutured separately by simple continuous suture pattern using catgut (1-0). Then subcuticular suture was done with catgut (2-0) and skin was sutured by horizontal mattress suture with non-absorbable nylon suture material. After completion of sutures on the skin, Antiseptic povidone Iodine (ointment Povin) was given on the incision line, then the site was covered with the benzoin seal.

3.4 Post-operative treatment and care:

After surgery, an antibiotic ceftriaxone @ 20mg/kg body weight (Inj. Ceftron IM 250mg) was administered intramuscularly for 5 days. Antihistaminic chlorpheniramine maleate @ 0.5 mg/kg body weight (Inj. Alerin 10ml) was administered intramuscularly for 5 days. Analgesic meloxicam @ 0.2 mg/kg body weight (Inj. Melvet 10ml) was administered subcutaneously for 3 days. The animal was suggested to keep in clean squeeze cage and to observe for 7 days. The owner was suggested to provide antiseptic povidone Iodine ointment on the incision site until completely healing.

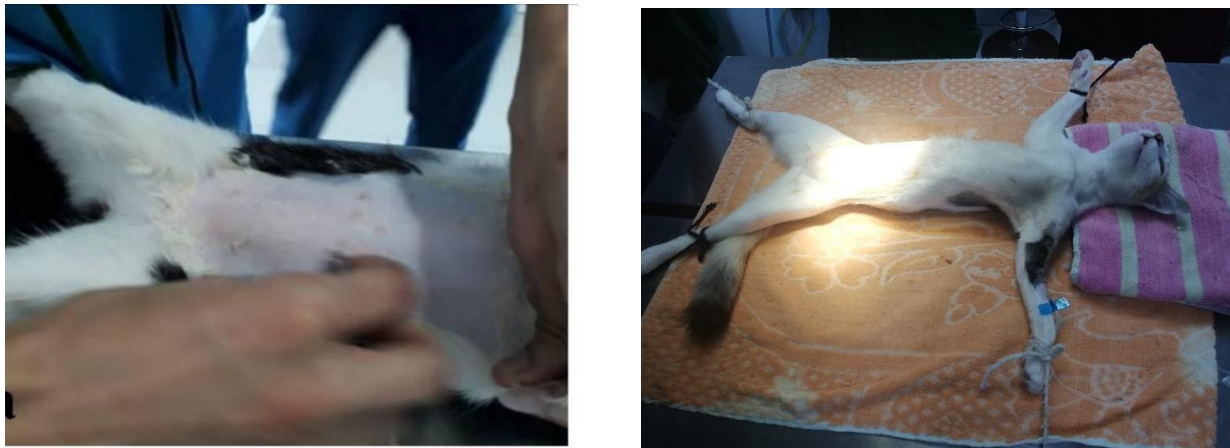


Figure 1: Surgical Procedure of spaying cat (Shaving of incision site, Administration of anesthetic agents and fluid therapy)

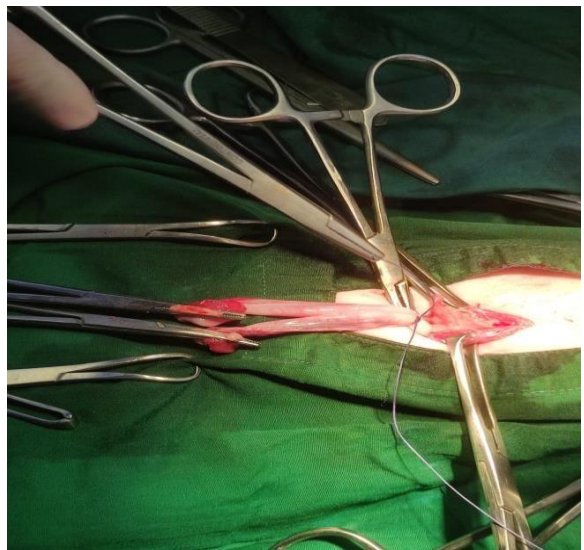
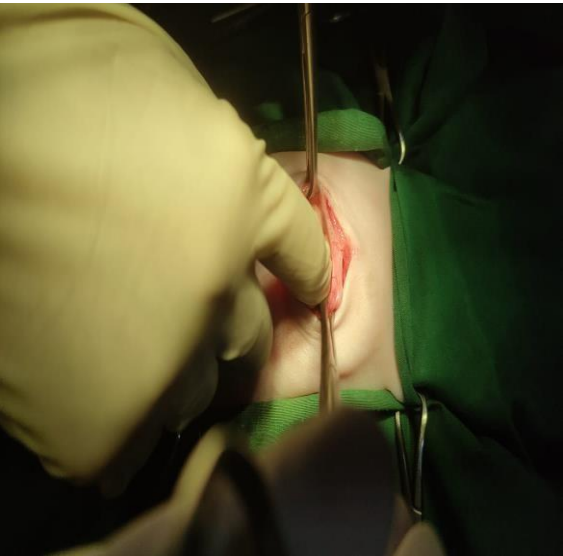


Figure 2: Surgical procedure of spaying in cat (Drapping of incision site, incision 2cm behind umbilicus, Exposing of Ovaries and uterus outside the incision)

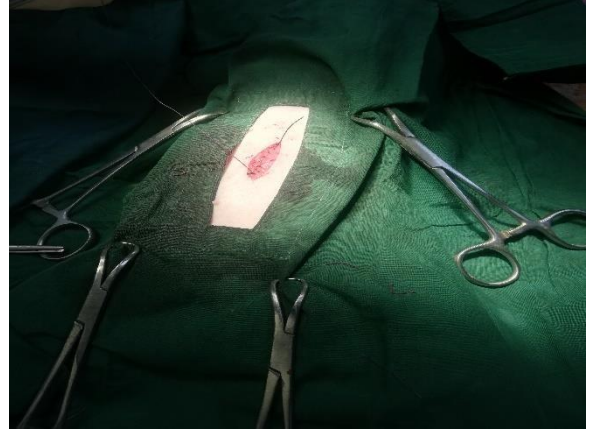


Figure 3: Surgical procedure of spaying in cat (Separation of uterus, closing of skin using Horizontal mattress suture, antiseptic ointment applied on incision site, Micropore surgical tape used)

Chapter 4: Results and Discussion

The operation was successful as the cat recovered from anesthesia. After recovering from anesthesia, the patient was sent to his owner house. A guideline was given to the owner and suggested to administer drugs regularly as prescribed. Generally, small incision is made along midline where there are fewer blood vessels in case of dog and cat (Jason, 2009). In this study, same procedure was followed during spaying. Burrow and Batchelor (2005) described the Complications associated with the suture material or ligatures which included hemorrhage, abdominal wall dehiscence, surgical wound infection, stump granuloma, fistulous draining tracts, inadvertent ureteral ligation, and chewed-out sutures. But we didn't face such complications. At 9th day after surgery, the patient visited to the TTPHRC again and the incision is completely healed. Previous study found that, spaying can prevent reproduction and make the animal docile (Janssens and Janssens, 1991). It can also help to protect them from uterine infection, uterine cancer and other cancers of the reproductive system. In this study, the owner wished to spay the cat to reduce its aggressiveness and to prevent reproduction. There is a prove that spayed female dogs live 23% longer than unspayed female dogs and have less chance to develop pyometra and mammary tumor. However, Kutzler and Wood (2006) said intratesticular injection of calcium chloride as a nonsurgical method which can effectively affect spermatogenesis, androgenesis and libido, while lacking toxicity and serious side effects for contraception of male dogs. The operation was successful which was similar with the operation performed by Janssens and Janssens, 1991; Azizunnesa et al., 2017.

Chapter 5: Conclusion

The traditional surgical technique of spaying in cat was found most appropriate. It was a quick, practicable, field applicable, and reliable method for spaying in cat. In this study, there were no complications during following-up the spayed cat. This traditional surgical technique of spaying could be recommended for the field condition to reduce its aggressiveness and to prevent reproduction. Further study is recommended to make the procedure easier.

Chapter 6: Limitation

The study period was very short because of the pandemic situation of Covid-19 and our busy time schedule of internship. As a result, I have used only one case (spaying in cat) in this study.

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Biography

I'm Michael Barua, son of Prodip Barua and Supti Barua. I passed secondary school certificate (SSC) examination from AL-HAJ FAZAL AMBIA High School, Ramu, Cox'sBazar in 2012 and Higher secondary school certificate (HSC) examination from Cox'sBazar GOVT. College, Cox'sbazar in 2014. I enrolled for Doctor of Veterinary Medicine (DVM) degree in Chattogram Veterinary and Animal Sciences University (CVASU) Bangladesh. I've immense interest to work in the field of Veterinary Public Health.