

Case Report

Surgical Removal of a Muscle Tumor from a Backyard Hen at University Veterinary Teaching Hospital Peshawar, Pakistan

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Abstract | Backyard poultry farming has been in practice in Peshawar and the surrounding regions. It provides a source of meat and eggs to the local population and helps in poverty alleviation and a source of family income through entrepreneurship. A hen with the complaint of swelling on abdominal region, came to Veterinary Teaching Hospital, The University of Agriculture Peshawar. Physical examination was performed and it was diagnosed a case of muscle tumor (myoma). A skin incision was given to expose and to remove tumor mass from the surrounding tissues. Peritoneum, muscle and subcutaneous tissues were sutured with absorbable suture (vicryl; polyglactin 910) and skin with a non-absorbable suture (silk). Owner was advised for daily check-up for any damage to the stitches and for regular dressing of the wound with antiseptic. Antibiotics and analgesic was recommended for 3-5 days respectively. As per feedback of the owner, the wound was healed and no complication was reported from the owner.

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Backyard poultry farming has been in practice in Peshawar and the surrounding regions. It provides a source of meat and eggs to the local population and helps in poverty alleviation and a source of family income through entrepreneurship. Dairy Science Park has been exploring indigenous resources for meat production and family income. Feasibility models have been developed for various poultry birds through postgraduate thesis research and are placed at the website and other sources of the Park.

Sindhi Aseel (Kulengi) is a breed of chicken and originates from Sindh provinces of Pakistan. These fighting cocks are noted being tall, strong legs, long curved neck, having its own athletic stance and good in fighting, so they are bred mainly for cockpit. These birds are kept for fighting and involvement of gambling also attract the masses. Sometimes prolong age resulting

into the development of soft tissues tumors. Myoma is benign tumor of smooth muscle. Unlike cancerous tumor they don't grow to other organs or metastasize. Myoma originating from striated or smooth muscle that are benign or malignant are observed occasionally in captive and free ranging birds. Generally smooth muscles tumors are reported twice as frequently as striated muscle tumors. Furthermore, malignant tumors are reported twice as frequently as counterparts (Moulton, 1990). Leiomyoma can occur anywhere in body but most common is uterus, small intestine and esophagus. Depending on the location of tumors, numerous symptoms could affect the function of important organs or senses. If the tumor is closed to the skin or an area of soft tissue, such as the abdomen the mass may be felt. Tumor usually occurs in old age as cell division problem disturbs. A leiomyoma is a benign smooth muscle tumor that very rarely be-

comes cancer (0.1%). They can occur in any organ, but most commonly occur in uterus, small bowel and esophagus. Leiomyomas of the skin is generally acquired and divided into several categories solitary cutaneous leiomyoma, multiple cutaneous, leiomyomas arising from the arrectores pilorum muscles Angioleiomyomas that are thought to arise from vascular smooth muscle, Dartotic leiomyomas originating in the dartos muscles of the genitalia, areola, and nipple Angiolipoleiomyoma (Freedberg et al., 2003; Jump et al., 2006).

Complication may develop if the case of myoma is not treated properly and can increase the complexity and repair expense. Therefore the only remedy is surgical intervention under local block after proper sedation to obliterate the tumor mass and repair defect.



Figure 1: A hard mass at abdominal region (muscle tumor) in backyard hen

Materials and Methods

A backyard hen with age 2 years was brought to the Veterinary Teaching Hospital, Department of Animal Health, The University of Agriculture Peshawar, Pakistan with complaint of enlarged abdominal region. On physical examination, a hard mass was observed and tentatively diagnosed confirmed a case of muscle tumor (myoma) and it was decided to perform surgical intervention (Figure 1). An anesthetic protocol consisted

a mixture of Ketamine (Taj Pharmaceuticals Ltd.) at a dose of 20 mg/kg body weight and xylazine (AnaSed, Bayer Corporation, USA) at a dose of 3 mg/kg body weight for the purposes of short-time anesthesia (Krajca and Juranová, 1994). Hen was put on dorsal recumbency. Skin incision was made to expose the tumor mass and then removed from the surrounding tissues (Figure 2). Finally, fascia and subcutaneous tissues were sutured with absorbable suture vicryl polyglactin 910 (DemeTECH's U.S. Small Business Administration South Florida District Office 100 South Biscayne Boulevard, 7th Floor Miami, Florida 33131-2011) and finally opposed the skin edges by vertical mattress sutures by using multifilament silk (Figure 3).



Figure 2: Incised tumor mass from abdominal region of the backyard hen



Figure 3: Apposed skin edges by vertical mattress sutures in backyard hen

Postoperative Care

Farmer was advised for daily dressing with povidone-iodine to check infection in wounds, postoper-

active analgesic consist flunixin meglumine (1.1 mg/kg, IM every 24 h in breast muscle “pectoral muscles”) for three days. Prophylactic antibiotic (Doxycycline; “Dumard, Nawan Laboratories (Pvt) Ltd”) at a dose of 20 mg/kg of body weight, orally every 24 h for 5 days. Stitches were removed at day 10 post-surgery.

Outcome

After discharging, telephone follow ups were done at 7, 14 and 21 days and the cock state was satisfactory. Area was healed and no complication reported from the client.

Discussions

Urban life is a very busy life and people have less time for merry making and enjoying. Most of the people are government servants or they have private jobs. On the other hand, rural life is full of natural beauty. Fresh air, lush green fields and beautiful gardens can be seen everywhere. People are free and enjoying their traditional games. Among them, the Cockfighting is an ancient spectator sport. There is evidence that cockfighting was a pasy-time in the Indus Valley Civilization (Sherman and David, 2002). Cock fighting is still a popular sport in rural area of Pakistan; however, “betting is illegal under the Prevention of Gambling Act 1977”. In rural area, people are fond of keeping fighting cock breed, known as Kulengi. These cocks are noted being tall, heavy and good in fighting. Gamblers uses almond and other power enhancing medicines (Steroids) to their fighter cocks.

Kulengi is one the distinctive breed usually used for game (cock fighting) and meat purpose. This breed is predominantly use by the agrarian communities and hobbyists’. The bird gets larger size and attains good weight when enough feed is provided. In some parts of the country, it is getting importance as meat animal (desi meat). The meat is very much liked by the society and now its meat is available in luxury hotels in big cities.

Inconsistencies to the infectious diseases leiomyoma problem is a benign soft tissue neoplasms commonly encounter in smooth muscle tissue cells. These lesions can develop everywhere in the where smooth muscles exist, but malignant transformation really exists. Myoma is usually an innocent tumor but a case is reported in Brodowski in which a large myoma of stomach

gives rise to secondary tumors in liver. Uterine fibroids or uterine muscular tumors are very common in uterus. Benign tumors resemble to the tissue of origin and are well differentiated, malignant tumor are poorly or completely undifferentiated. It is slow growing and remained localized to the site of origin and well circumscribed and have a capsule whereas malignant tumors grow faster and are poorly circumscribed and invade the surrounding tissues or metastasize to distant sites (Kumar et al., 2012). Several types of muscles tumor encounter in poultry birds among them, Leiomyoma is a benign tumor of smooth muscle, rhabdomyoma is a benign tumor of striated muscles and rhabdomyosarcoma is a malignant tumor of striated muscles (Encyclopedia Britannica, 2016). Some suspected causes of benign tumors include a traumatic injury at the tumor location, chronic inflammation (or long-term stress that leads to inflammation), an undetected infection, or diet. Benign tumor may or may not cause pain. If tumor mass is near nerve, it may apply pressure on it and then cause pain.

Conrad et al. (1996) reported that benign soft tissues are fairly common and are treated with surgery alone. Prior to 1970’s, surgery was the primary therapy for malignant soft tissue tumors and most patients with high grade tumors had a poor prognosis and a significant mortality. Since the mid 1970’s, radiation therapy, chemotherapy, and advanced surgical techniques have helped increased long term survival and decrease the need of ablative surgery.

Complication may develop if the case of myoma is not treated properly and can increase the complexity and increased repair expense. Therefore, the only remedy is surgical intervention under local block after proper sedation with xylazine in combination with ketamine to obliterate the tumor mass and repair defect. Therefore, surgical intervention is the only remedy to completely abolish the tumor and save the life of pet birds.

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Conflict of Interest

Authors declare that they have no financial or person-

al relationship with other people or organizations that could inappropriately influence or bias the content of the paper.

Authors' Contribution

Mian Saeed Sarwar performed surgery; Sania Subhan Qureshi assisted in anesthesia & in surgical procedure and Dr. Zahir Shah remained in contact with owner in post-operative period and helped in article writing.

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