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Fibroma Molle (Acrochordon) in a Caucasian female Dog: case report

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Abstract

This particular case report pinpoints the histopathological method of diagnosis and surgical way of managing Fibroma Molle (Achrochordon) in an 8-year-old Caucasian Bitch. During clinical examination, an abnormal growth was noticed on the left ventral region which was adjacent to the first teat of the mammary gland. The growth became pendulous over a period of six (6) Months with some bruises prominent at the base. Upon physical Examination, there was no response to pain stimulus. The entire tumor was Measured and the diameter was 11.5cm, the Circumference was 23cm² whereas the Length from the neck was 12.5cm. The Vital parameters were all within normal range. Histopathological examination revealed flattening of the rete pegs, thin epidermis, dermal fibrocollagenous bands and presence of vascular channels which suggests Fibroma Molle (Achrochordon). Invasive surgery was conducted and the entire tumor was carefully excised and the surgical wound closed. The Bitch recovered fully after 14 days following strict post-operative measures. Non recurrence was observed one year later.

Keywords: fibroma, tumor, excised, growth, Caucasian

Introduction

Fibromas are classified as benign tumors which originate from fibrous connective tissue. They are mostly seen around the trunk, eye, neck and may grow in all organs (Heenan, 2005) [7]. They originate from mesenchyme tissue and are broadly classified as either Hard fibroma (also known as Fibroma durum) or soft fibroma (Also known as Fibroma molle or Acrochordon). They are slow-growing, oval tumors that are firm and nodular, however, few cases have been reported to be soft and vascular (Singh *et al.*, 2016) [8]. The amount of collagen in the tumour determines whether the fibroma is soft or hard. However, Fibroma occurring from other organs derived their names from that particular organs such as the Angiofibroma from the Cavernusum, fibroma cysticum from Cyst, Myxofibroma produced by liquefaction of the underlying soft tissue, Cemento-ossifying fibroma is hard and fibrous, most frequently seen in the jaw and Ovarian Fibroma from the Ovaries.

Furthermore, Soft Fibromas/Fibroma Pendulans/Fibroepithelial Polyp or skin tags are the most commonly seen skin lesions on humans, dogs but rare in cats. Soft fibroma is usually seen as a solitary, relatively large tumor of more than 1 cm on the trunk. If it appears as an enlarged, soft pedunculated mass hanging from the skin, its referred to as fibroma pendulum. Soft fibroma tends to occur in obese persons or animals and mostly seen in female subjects; it is thought to relate to skin aging.

It usually occurs when a group of reactive hyperplasia develops in response to a chronic, recurring tissue injury which further stimulates an exuberant or excessive tissue repair response (Mohammed *et al.*, 2010) [9].

In this paper, we reported a case of fibroma mole in an Eight-Year-old Caucasian bitch and its surgical method of management.

Case History

On 5th July 2019, a client presented her dog to the University of Maiduguri Veterinary Teaching Hospital (UMVTH) with the chief complaint of abnormal growth on the left ventral region close to the first teat of the mammary gland which became pendulous over a period of six (6) Months.

Upon physical examinations, Soft pendulous and free moving mass was noticed on the subcutaneous region around the left ventral thoracic region. There was no response to pain stimulus. Upon Measurement, the growth's Diameter was 11.5cm, the Circumference was 23cm² whereas the Length was 12.5cm

Diagnosis

The Vital parameters were all within normal range and the mucus membrane colour was pink. Upon hematological analysis, all the values appeared within normal range. Excisional Biopsy was taken, where we saw proliferation fibrous cells. Furthermore, Histopathology was conducted hence we observed, flattening of the rete pex, thin epidermis, dermal fibrocollagenous bands and presence of vascular channels. This are all indicative of Acrochordon (Fibroma Molle) which is contrary to keloid (hypertrophic scar) where blood vessels are absent and haphazardly arranged bands of collagens that are hyalinized and glassy.

Surgical Management

Presurgical preparation: Scrubbing

The entire growth skin was shaved and scrubbed with 0.3% w/v Chlorhexidine gluconate followed by gentle circumferential scrubbing with gauze soaked in 70% Methylated spirit round the surgical site, while the tumor was wrapped with gauze soaked in methylated spirit prior to further procedures.

Anesthesia

The dog was sedated using Diazepam 0.3mg/kg intravenously (PHA057 | Hameln Pharmaceuticals - DZ 2 10mg/ 2 ml ampule). The dog was monitored for signs of sedation. The signs were obvious exactly 3 minutes post administration. Furthermore, local anesthesia using 2% Lidocaine hydrochloride plus epinephrine (HOSPIRA INC LAKE FOREST IL 60045 US) subcutaneously was applied in a ring block fashion.

Surgery

The dog was gently restrained on right lateral recumbency on the surgical table of the small animal surgery unit of the Hospital. Blunt elliptical skin incision was made slightly above the neck of the tumor to avoid major bleeders. The incision was extended slightly deeper where we noticed five (5) heavily engorged blood vessels supplying blood to the tumor. We carefully clamped all the bleeders with small hemostatic forceps. The bleeders were double ligated with size 2 Vicryl which is a synthetic absorbable suture material to avoid bleeding when transected. After double ligation, the blood vessels were transected. The entire tumor and the surrounding tissues were all excised using surgical blade size

20 with minimal bleeding. Subcuticular suture pattern was done using size 2 Vicryl (suture material) while Horizontal mattress using nylon size 2/0 to close the skin.

Post-Operative Care

The site was infiltrated with oxytetracycline spray (Pantex, Holland) for five days to prevent secondary bacterial infection, while 5% oxytetracycline injection at 200mg/kg was administered for 5 days intramuscularly for systemic prophylaxis. Diclofenac sodium at 1.5mg/kg was given for 3 days intramuscularly as an analgesic. The suture Material (Nylon) on the skin was removed 14 days after the surgery without any Surgical complications.

Discussion

Fibromas are benign tumors of the connective tissues, however, fibrosarcoma are designated to Malignant tumors of the connective tissues. Fibromas are further divided into hard (Fibroma durum) or soft Fibroma (Fibroma molle, Skin tag or Acrochordon). Soft fibromas are described as pedunculated tumors as a result of an elongation in their conjunctive tissue, especially in superficial tumors (Najam *et al.*, 2013) ^[1, 6]. If the tumors are allowed to stay for a long period of time, ulcerations with superficial bleeding might occur, this is often as a result of repeated trauma caused by constant contact with hard surfaces. Furthermore, Fibroma may be asymptomatic at the early stage, however, it has the potential to grow larger to 25cm or more. It is paramount to differentiate it with other lesions such as lipoma, Keloid, Myxoma, etc. since the present with similar clinical signs, size and location.

In our case, it was presented as a soft pedunculated and unencapsulated growth with few mononuclear cells and multiple blood vessels pointing towards fibroma mole (Acrochordon) that does not have potential risk for malignancy.

Furthermore, there is no Clinical report of a case of Fibroma in dogs, but was it was reported in other animals like cattle (Kumar *et al.*, 2014) ^[4] and in Chicken (Singh *et al.*, 1968) ^[5]. Treatment of Fibroma is usually Electrocautery using laser; flash lamp pulsed dye laser, cryosurgery, intralesional injection of ethanol or Sodium Tetradecyl Sulfate sclerotherapy. (Gupta *et al.*, 2015) ^[3]. Surgical excision is recommended especially in a long-standing condition where the tumor size is huge (between 20-25cm in length and 15-20cm in width)

This is why we chose to perform surgery in our case since the tumor size here is huge and highly vascularized with five prominent blood vessels.

One-year post surgery, we didn't notice any reoccurrence from the same site or other parts of the body. The dog well and hearty.

Table 1: Hematology Interpretation

HEMATOLOGY INTERPRETATION		
Haematological parameters	Test results	Reference values
PCV (%)	37	37–55
Hgb(g/dL)	12	12.4-19.1
RBC($\times 10^{12}/\mu\text{L}$)	4.5	5.2-8
MCV(fL)	75.5	62.7-72
MCH(pg)	26.6	22.2-25.4
MCHC(g/dL)	35.3	34-36.6
WBC($10^3/\mu\text{L}$)	15.4	5.4-15.3
Neutrophil–mature	8008(52%)	2750-12880(51-84%)
Lymphocytes	6160(40%)	430-1400(8-38%)
Monocytes	770(5%)	50-1400(1-9%)
Eosinophils	462(3%)	0-1400(0-9%)
BLOOD FILM REPORT	NO HAEMOPARASITE SEEN	



Fig 2: Animal upon Clinical Presentation



Fig 3: A. Measurement of the Tumor



Fig 3: B: Weighing the tumor

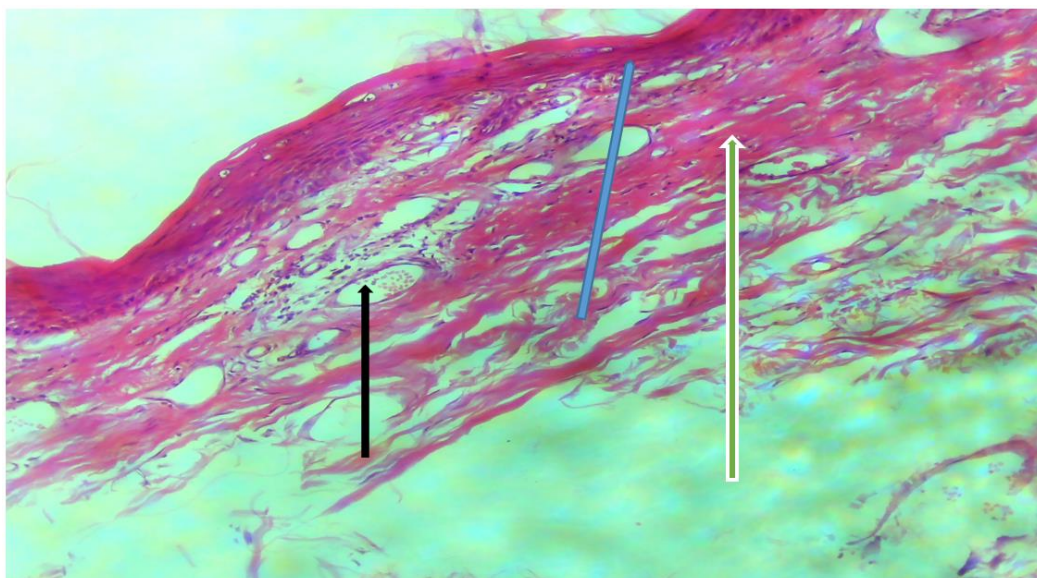


Fig 4: Flattening of the rete pex, thin epidermis (Blue arrow), dermal fibrocollagenous bands (Green arrow) and presence of vascular channels (black arrow)

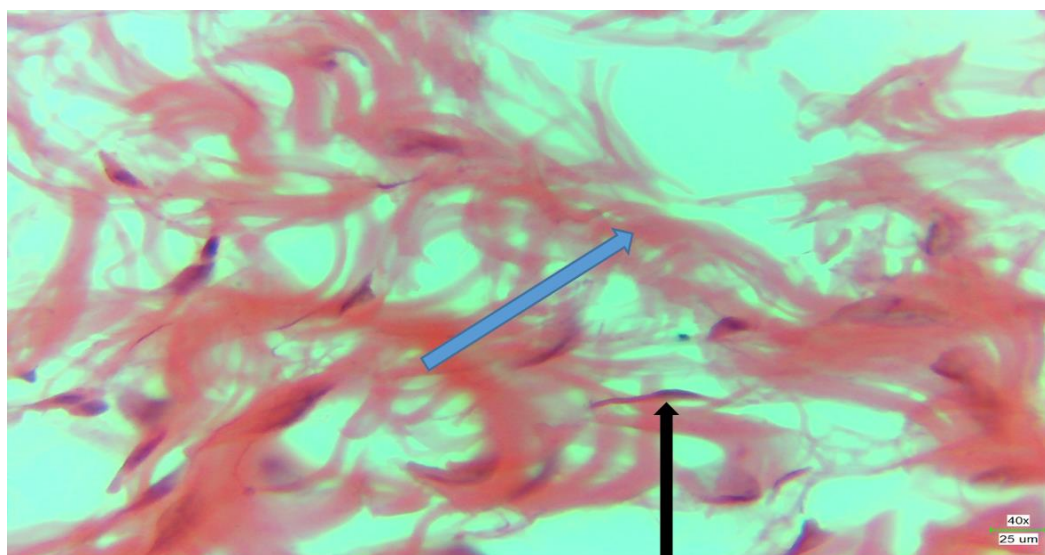


Fig 5: Fibrous connective tissues (Blue arrow) with stellate shaped cells (black arrow)

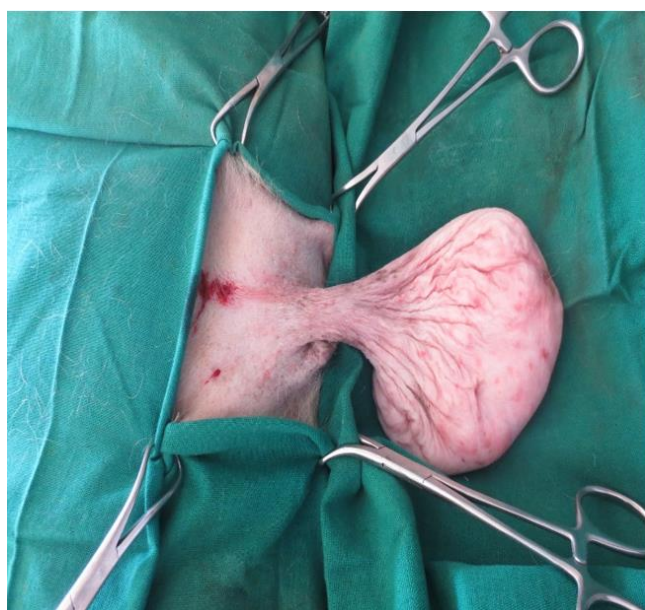


Fig 6: A. Surgical Preparation

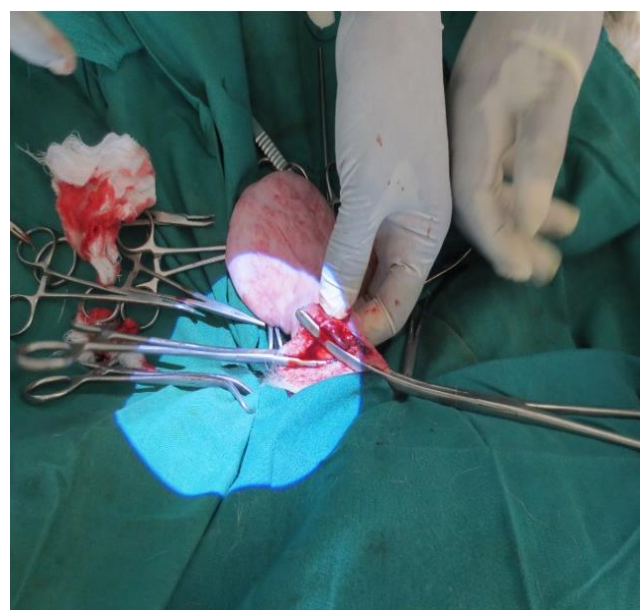


Fig 6: B. Surgical removal of the Tumor

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