

## INTERMEDIATE GRADE OF SPINDLE CELL TUMOUR IN DOG- A CASE REPORT

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**Abstract:** A dog of nondescript breed was presented to Animal Rahat emergency response team, with history of a having large swelling (larger than tennis ball) on caudo-medial aspect of left foreleg just above elbow joint and swelling was since 3 months and progressively increasing in size. On clinical examination, it was a hard swelling; no pus was aspirated on puncturing with needle after shaving the area and preparing the site aseptically. Dog was feeling pain on palpation of mass and was limping while walking. The swelling was pedunculated. This mass was excised surgically under general anaesthesia by using Injection Xylazine as sedatives and cocktail of Injection Ketamine & Diazepam as induction and top up anaesthesia. Site was prepared aseptically and entire mass was removed after appropriate ligation of the blood vessels and then incision was closed by using cat gut number 2 for suturing internal muscles & fascia and silk for suturing the external skin. Antibiotic and painkiller were administered for a period of seven days. Dog recovered completely without any complications and no reoccurrence was observed. After surgical excision of the mass, it was cut vertically and submitted to laboratory for confirmatory diagnosis. Histopathological evaluation confirmed it as spindle cell tumour, characterised by cellular tumour composed of elongated spindle cells in groups, sheets and nests and have mostly vesicular nuclei.

**Keywords:** Spindle cell tumour, Histopathology, Elbow joint, Dog, Soft tissue sarcoma.

### Introduction

The skin and subcutaneous tissue is the most common site for canine tumours (4,5). Skin tumours in the dog are more likely to be benign than malignant. Spindle cell neoplasms are diverse in nature by means of clinicopathologic and tumour biological heterogeneity. Primary spindle cell sarcoma (SCS) is an extremely rare entity and one of the least reported tumour. It is a type of connective tissue tumour and generally begins in layers of connective tissue such as that under the skin, between muscles, and surrounding organs. They are usually surrounded by a pseudo-capsule, tissue that resembles a capsule but is formed by the compression of peri-tumoral connective tissue and may contain or be confluent with tumour cells. Cutaneous and subcutaneous soft tissue sarcomas have a low to moderate postsurgical recurrence rate (reported ranges of 7 to 30%) and have low metastatic rate (reportedly up to 17% of cases). The treatment of choice for canine cutaneous and subcutaneous soft tissue

sarcomas (STSs) are surgical excision (5). Whereas most canine cutaneous and subcutaneous STSs have a good prognosis, the range of biological behaviour is broad.

### **Case history, diagnosis and treatment**

A nondescript breed of adult dog was presented to Animal Rahat emergency response team with history of having large swelling (larger than tennis ball) (**Figure:1,2**) on caudo-medial aspect of left foreleg just above elbow joint and swelling was there since 3 months and progressively increasing in size. On clinical examination, it was a hard swelling, no pus was aspirated on puncturing with needle after preparing the site aseptically. Dog was feeling pain on palpation of mass and was limping while walking. The swelling was pedunculated. Hence it was decided to excise the mass surgically.

Dog was sedated with Injection Xylazine @ 2 mg/kg of body weight, after 10 minutes' time, after achieving the effect of sedation, the cocktail of Injection Ketamine & Diazepam (in 1:1 ratio) @ 1 ml/10kg of body weight was administered as induction, and maintained on top up doses of cocktail of Injection Ketamine and Diazepam (in 2:1 ratio) until surgery ended. Site was prepared aseptically and incision was made in circumference and dissected bluntly until reaching below the base of the tumour mass and tumour mass was removed completely (**Fig-3,4**) which was weighing 350gm, blood vessels were ligated appropriately. Then surgical wound was cleaned and muscles layers were sutured by using chromic cat gut no. 2 and then skin was opposed using silk 2-0 with horizontal mattress sutures pattern. Antibiotic (Inj. Ampicillin & Cloxacillin @ 20 mg/kg of body weight) and NSAID (Inj. Meloxicam @ 0.2 mg/kg of body weight) was administered for next five days. Dog was kept under intensive care for five days to check for any post-operative swelling, exudation from the surgical site, there after animal was handed over to the owner. In next 7 days' time, wound healed completely and sutures were removed. Animal has recovered completely, no limping while walking, no further reoccurrence or any other complication was observed. (**fig 5**)

After surgical removal, tumour mass was cut vertically and cross section was appearing soft, spongy, greyish colour mass (**Fig 6,7**). Histopathological evaluation confirmed it as a spindle cell tumour, characterised by cellular tumour composed of elongated spindle cells in groups, sheets and nests and have mostly vesicular nuclei. Moderate level of inflammatory cells, dilated and congested blood vessels with focal necrotic area were visible (**Fig 8**).

## Discussion

Damiano et al 2008 observed low metastatic and recurrence of tumours which is in agreement of this case. The current gold standard for tumour diagnosis is histopathology (Nazir et al,2010). In this study, we did not obtain a specific MoAb for spindle cell tumour and could not conduct IHC for the differentiation of the tumour types. However, we diagnosed the case as a canine intermediate grade of spindle cell tumour based on the pathognomic histopathological lesions. Low-grade spindle cell sarcomas located at or distal to the elbow and stifle joints can be excised without need for wide or radical surgery, which is in agreement in this case.

## Conclusion

Surgical excision is best treatment for skin tumour like spindle cell tumour in case of dogs without reoccurrence and any complications.

**Fig 1 & 2- Growth on caudo medial aspect of elbow in dog**



**Fig 3-4- While excision of tumour and surgical wound was closed**



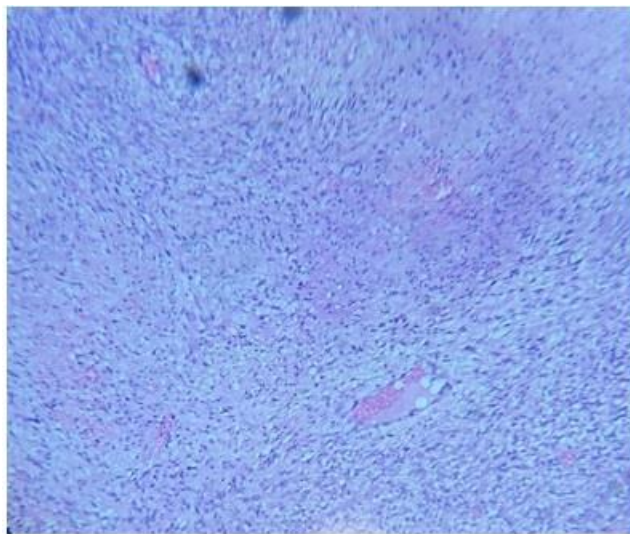
**Fig 5: Dog was recovered without any complications**



**Fig 6-7: Tumour mass was excised and cross section of tumour shows white, soft and spongy mass**



**Fig 8: Histopathological picture of growth**



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