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Surgical management of thoracic fibrosarcoma in an eleven-year-old female Rottweiler dog

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Fibrosarcoma is defined as a malignant mesenchymal neoplasm caused by an abnormal proliferation of fibroblasts. This neoplasm arises most commonly in the skin, subcutaneous tissues and oral cavities of domestic species with internal sites of origination less common (McGrath *et al*., 2022).

An 11-yr-old female Rottweiler dog was presented with a complaint of swelling in the lateral thoracic region for the previous 3 months. Clinical examination of the case revealed large non-painful soft tissue swelling of left lateral thoracic region (Fig.-1). The fine needle aspiration cytology was suggestive of neoplastic growth. After clinical and cytological confirmation of the neoplasm, it was decided to surgically remove the tumour.

Fig.1: Large mass on the left lateral thoracic region.

The patient was prepared for aseptic surgery and the site was scrubbed with 7.5% povidone iodine solution and 70% isopropyl alcohol thoroughly. The dog was sedated with xylazine (1 mg/kg body wt., i.m.), and induction and maintenance of anaesthesia was done with 2.5% thiopentone sodium administered intravenously. An 18 cm long linear incision was made on the right thorax with a No. 23 BP blade. Blunt dissection of the subcutis for further visualization of deeper tissues was done (Fig. 2). Due to the close proximity of the mass with thoracic cavity, the dissection was done with extreme care and caution. The mass was removed after ligating the blood vessels with catgut No. 2-0. The muscle was closed using vicryl No.1-0 in an interrupted suture pattern and subcutis was closed in continuous pattern. The skin was closed with Trulon No.1-0 in horizontal Mattress pattern.

Following the surgery, antibiotic ceftriaxone (25 mg/kg body wt., i.m.) and analgesic meloxicam (0.2 mg/kg body wt., i.m.) were administered for 7 days and 3 days, respectively. Regular dressing was advised for surgical wound. The skin wound healed normally and sutures were removed on 14th postoperative day. The dog recovered uneventfully. The resected mass weighed about 7.5 kg. Histopathology of the removed mass revealed spindle shaped fibroblasts arranged in interwoven patterns. Tumour cells were anaplastic with marked cellular and nuclear pleomorphism.

Soft tissue sarcomas are a group of invasive malignant tumours formed by neoplastic mesenchymal cells. They can occur anywhere on the body, but often affects the skin and subcutaneous tissue. In most cases, the treatment requires surgical resection. Surgical resection of the tumours was associated with a significantly better outcome than conservative management. The median survival times after surgery for dogs with osteosarcoma was 17 weeks, for dogs with fibrosarcoma it was 26 weeks and for dogs with chondrosarcoma it was 250 weeks. En-bloc excision of primary tumours affecting the chest wall was associated with minimal morbidity, but long-term survival was limited by distant metastases, primarily to the lungs (Baines and Lewis, 2002).

References

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