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Two Cases of Dogs with Infiltrative Lipomas of the Thigh Region

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Materials and methods

Clinical presentation
A 8-year-old male Labrador Retriever (dog1) is presented for swelling and failure of wound healing on the right thigh. Previously, a medical treatment (NSAIDs and antibiotics) and a surgical exploration were performed unsuccessfully. Clinical examination reveals a firm, badly defined and painful swelling in the lateral diaphyseal part of the right femur (Fig 1a).

A 7-year-old male Beauceron (dog2) is presented for recurrence of a mass in the left thigh, following 2 successive surgical excisions. A left hindlimb lameness is observed and a voluminous, badly defined and painful swelling is present in the caudal region of the left thigh (Fig 1b).

Presumptive diagnosis
In both cases, a CT exam of the caudal abdominal, pelvic and cranial regions is consistent with a lipoma or liposarcoma of the thigh with muscular invasion (Fig 2). Cytologic examination of the mass is consistent with a lipoma in dog2.

Surgical procedure
Excision of both tumours is performed after blunt and sharp dissection of the surrounding sound muscles.

In dog1, an approach of the femoral diaphysis and distal femur by lateral incision is necessary to remove both the tumour and the infiltrated vastus lateralis muscle (Fig 3a).

In dog2, after an approach of the caudal region of the femur by caudomedial incision, the tumour is removed as well as the infiltrated semimembranosus muscle (Fig 3b). The sciatic nerve, located near the tumour, is isolated. It doesn’t seem to be grossly invaded along its crural course.

In each case, 2 Redon’s drains are left in the intermuscular space and subcutaneous space before layered closure. They are attached to a continuous suction device.

Results

Definitive diagnosis
In both cases, histopathology concludes to infiltrative lipomas without any malignancy criteria and tumour-free surgical margins.

Follow-up
Lameness disappears in the days after surgery. A CT reexamination is performed on dog2 at 14 weeks PO, showing no visible tumoral recurrence.

Both dogs are in good condition without any signs of thigh swelling 40 months PO for dog1 and 43 months PO for dog2.

Discussion

Although simple lipomas are frequently encountered, infiltrative lipomas (IL) are unrecognized by most veterinarians. These benign tumours present local aggressivity and invasion of adjacent structures, like muscles. Therefore, aggressive treatment including amputation when local complete resection is impossible, may be necessary for local control.

Complete excision of IL in the thigh region is often difficult because of the large size of the tumour and vascular/nervous structures entrapment. Furthermore, as margins are indistinct, aggressive resection is mandatory. Emphasis must be put on dead space management after tumour excision especially with use of drain and adequate suture. Finally, complete excision may not be possible without interfering with normal limb function.

Prognosis after surgery is guarded. Recurrence rate ranges from 36 to 50%, with mean disease-free interval of 239 days. Radiation therapy can be considered either alone or as an adjuvant treatment.

Conclusion

Infiltrative lipomas should be handled with complete imaging of the tumoral extension and challenging aggressive surgical treatment, otherwise tumoral recurrence is highly likely to occur.

References