Case report 673

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Radiological studies

Fig. 1. A frontal plane view roentgenogram shows an expanding, lytic lesion with a minimal intralesional density and a sclerotic rim in the proximal portion of the left third metatarsal.

Fig. 2. A lateral view roentgenogram shows a bulging, thin, and eroded cortex with minimal intralesional density and periosteal reaction is the left third metatarsal.

Clinical information

A 4-year-old, 70 kg, male Great Dane dog was studied for lameness in a left rear limb and a firm, painful swelling of the left metatarsal region of several weeks' duration. The lameness and swelling were partially responsive to antibiotic treatment. On physical examination, a palpable mass approximately 1.5 x 3.5 cm was noted with tenderness to palpation but no associated redness.

Radiographs of the left metatarsus revealed an expanding, lytic lesion in the third metatarsal bone. Bulging of the anterior surface corresponded to the palpable mass. The cortex was thin and eroded in areas with minimal periosteal reaction and sclerosis in the proximal region of the third metatarsal bone (Fig. 1, 2).

A surgical biopsy of the lesion was performed.

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Diagnosis: Telangiectic osteogenic sarcoma

The lesion contained a large amount of blood and some solid tissues which were obtained by curettage. The pathological specimens consisted of numerous, irregular, firm, dark-purple and pinkish tissues from a few mm to 1.2 cm in diameter. Microscopically, the curetted tissues consisted of blood spaces outlined by fibrous, osteoid, or granulation tissue (Fig. 3, 4). Some of the spaces were partially lined by an indistinct endothelium. Also present were some solid areas of multinuclear giant cells (Fig. 5) and fibrous, osteoid, or osseous tissues. A diagnosis of aneurysmal bone cyst was made based on the microscopic findings of the biopsied specimens.

One month following the initial biopsy, the lesion was further curetted and the cavity filled with autogenous cancellous bone graft, obtained from the left iliac crest. The

Pathological studies

Fig. 3. Aneurysmal spaces with granulation tissue and trabecular septae are noted

Fig. 4. Blood spaces lined by an indistinct endothelium, fibrous and osteoid tissues are evident

Fig. 5. Solid area of multinuclear giant cells and scanty fibrous stroma is visible

Fig. 6. Closely packed sarcomatous cells are present with mitotic figures and scanty osteoid formation

Fig. 7. Irregular osteoid formation, giant cells, and fibrous stroma are observed