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An ulcerating subcutaneous mass on the hind limb of a mouse

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A 21-month-old male Swiss OF1 mouse from the breeding colony of the Experimental Animal Service of the University of Córdoba was presented to the veterinarian. The mouse had a raised, ulcerated mass on the flank of its right hind limb that measured 2.0 cm × 2.5 cm (Fig. 1). The lesion was first observed 15 d previously and had grown rapidly, but the mouse showed no signs of pain, distress or illness.

On clinical examination, the mouse was alert and in good body condition. It was eating and defecating normally. The animal had been bred in conformance with the European Economic Community Directive 86/609 on the protection of animals used for experimental and other scientific purposes. Because of the large size of the mass and age of the mouse, we decided to euthanize it. In accordance with our policies, euthanasia was done by cervical dislocation.

At necropsy, the most notable lesion was the raised mass on the lateral right hind limb. The overlying skin was ulcerated. On cut sections, the mass was solid, and the sections had a dark red mottled appearance. We did not observe gross lesions in any other organs. Tissue samples of all organs and of the mass were fixed in 10% neutral buffered formalin and embedded in paraffin. All tissue sections, 3 µm thick, were stained with hematoxylin and eosin.

Microscopically, the lesion was well-circumscribed, unencapsulated and located in the dermis and subcutis. The mass was composed of pleomorphic cells with solitary nuclei and abundant, uniformly eosinophilic cytoplasm. Cells were round, oval, strap-like or racket-shaped, and many cells contained multiple nuclei. There were two or three mitotic figures per high power field. We saw no other microscopic lesions in other organs.

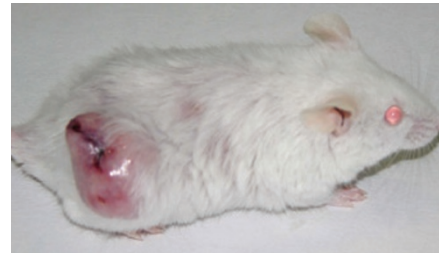


FIGURE 1 | A 21-month-old male Swiss OF1 mouse with a mass in the right hind limb that ulcerates the skin.

Do you think the mass is traumatic, infectious or neoplastic? What is your tentative diagnosis? How would you achieve a more definitive diagnosis?

What's your diagnosis?

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