

Paws claws and judder things



August 2022

Move over coronavirus!

KAREN BAILEY

Move over Corona – monkeypox is the hot new zoonosis in town! New Zealand recently recorded its first human cases of monkeypox in the latest zoonotic outbreak to hit the headlines. Following are a few facts about monkeypox and how it manifests in animals and humans.

Monkeypox belongs to the Orthopoxvirus genus in the family Poxviridae, which also includes variola virus (smallpox) and vaccinia virus (used in the smallpox vaccine). Disease primarily occurs in tropical rainforest areas of Central and West Africa. In endemic areas, maintenance hosts are thought to be wild rodents (rats/squirrels), with occasional spillover to primates (including humans). There are two clades: West African and the more virulent Congo Basin, which has an approximately 10% human case fatality rate in Africa.

Transmission is mainly via skin, mucus membranes and respiratory tract, with an incubation period of about three days to three weeks depending on species and route of infection. Animal to human transmission can be from bites, scratches, or other contact with infected animals or their meat. Transmission between humans is generally from close physical contact. Spread beyond endemic areas is generally driven by human to human transmission, but trade in wildlife is also a risk.

Animals known to be susceptible include non-human primates and many rodents, but there is no documented evidence of infection of domestic ruminant livestock, or cats and dogs or, as yet, human to animal transmission.

The World Organisation for Animal Health recommends the use of disposable protective clothing if a case is suspected. Clinical signs

include pyrexia, changed appetite, conjunctivitis, ocular discharge, cough, sneeze, abnormal respiratory noise, lymphadenopathy, oral ulcers and skin lesions with or without pruritis. Reservoir species may be asymptomatic carriers.

Skin lesions in primates generally begin as small papules that develop into pustules that crust over and may leave small scars. A typical lesion has a red, necrotic, depressed centre, surrounded by epidermal hyperplasia. Lesions can affect the whole body but are usually concentrated on the extremities and face.

A specific monkeypox vaccine is in the trial phase of development, but smallpox vaccine provides some protection and older people previously vaccinated against smallpox appear less at risk. Suspected animal cases in New Zealand should be reported immediately to **MPI on 0800 80 99 66**.

Free-T4 testing - worth the wait!

Equilibrium dialysis (ED) is considered the gold standard methodology when measuring Free-T4 in dogs and cats.

Recent reports indicate that alternative methods for measuring Free-T4 may not offer any significant advantage over measuring TT4 alone, especially in dogs with non-thyroidal illness.*

Despite recent logistical issues and

increased costs, Gribbles Veterinary will continue to offer this valuable diagnostic test (Free-T4 ED), but on a fortnightly rather than weekly basis. The price will remain the same as listed in our current price book.

* Bennaim M. et al. Free thyroxine measurement by analogue immunoassay and equilibrium dialysis in dogs with non-thyroidal illness. *Res. in Vet Sci.* 147:37-43, 2022.

What's inside?

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Land of the giants

SUNAO FUJITA

Clinical history:

A 16-year-old, thoroughbred gelding presented with a slow growing mass in the left ventral thoracic/axillar region, extending into deep tissue (Figure 1). The mass was firm and non-mobile and had been present for six months, but had not changed in size.

Cytology:

The smears were of high cellularity, predominantly composed of spindle cells with moderate numbers of macrophages. The spindle cells were sometimes arranged in variably sized aggregates with small amounts of associated eosinophilic extracellular matrix. Their nuclei contained finely stippled chromatin with single to multiple nucleoli. They had moderate amounts of basophilic cytoplasm and showed moderate anisocytosis and anisokaryosis.

There were occasional multinucleated giant cells - up to 100 nuclei (Figure 2). The macrophages frequently contained phagocytized haemosiderin and/or hematoidin crystals. Given the marked spindle cell proliferation with moderate atypia and the occasional multi-nucleated giant cells, a top differential was a giant cell tumour of soft parts.

Histology:

Surgical excision for histopathology was

Figure 1. A mass in the left ventral thoracic/axillar region.

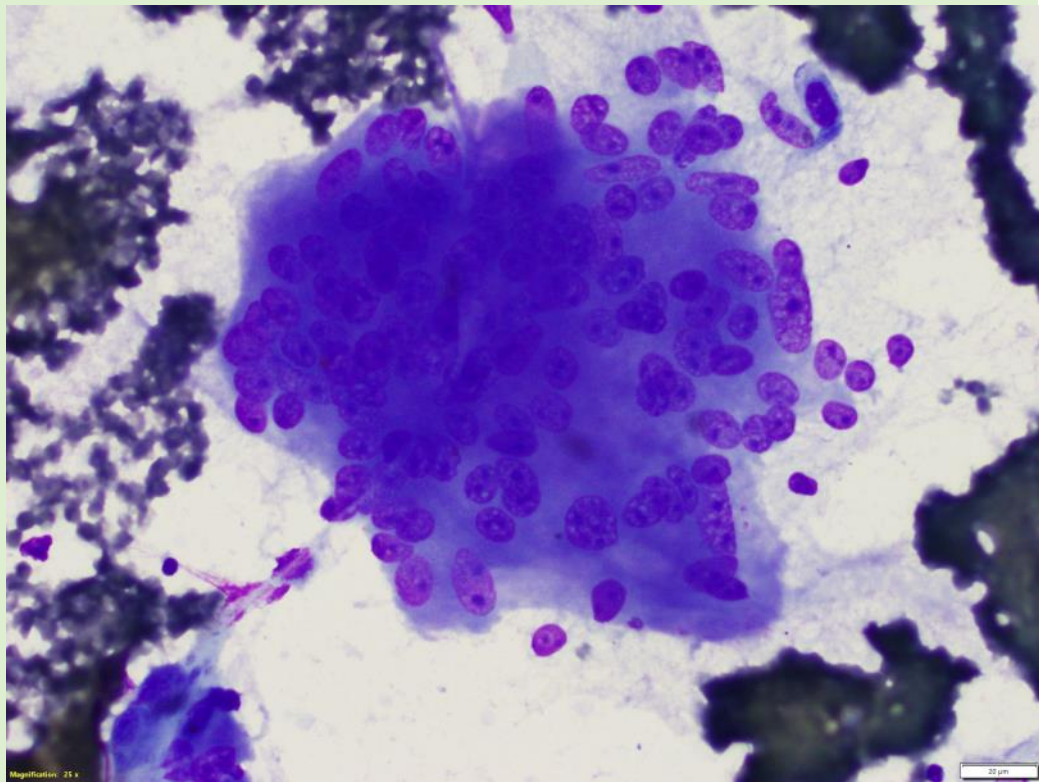


Figure 2. Cytology from the mass lesion, demonstrating a multinucleated giant cell with a couple of spindle cells on upper right area.

performed two-months after the cytologic examination. Infiltrating the subcutis to the lateral margins of the tissue were proliferations of spindle cells admixed with small numbers of inflammatory cells (macrophages, lymphocytes and plasma cells). The spindle cells had moderate anisocytosis and anisokaryosis, and were often multinucleate with three mitotic figures per high power field (400x) (Figure 3). Some of the neoplastic cells and macrophages contained phagocytized haemosiderin.

Diagnosis:

Giant cell tumour of soft parts.

Discussion:

The terminology/ classification, cellular origin, and microscopic criteria of giant cell tumour of soft parts (GCTSP), have been historically confusing in veterinary medicine. The histogenesis and origin for GCTSP remains controversial and uncertain.

Initially, this neoplasm was reported in humans and cats. It was referred to as malignant giant cell tumour of tendon sheath, and considered a malignant counterpart of benign giant cell tumour of tendon and tendon sheath (since tendon/tendon sheath appeared to be original sites of the

neoplasm)¹. However, further studies revealed that GCTSP can be seen in different locations and is regarded as a distinct entity with a different origin.

GCTSP is reported in many domestic species (horses, dogs, cats, etc.) as well as humans. In humans, superficial and deep forms have been described, based on the localization and growth pattern. In veterinary medicine, the deep form has been observed mostly in cats and dogs, whereas horses commonly have the superficial form.²

The deep forms typically involve fascia and skeletal muscle with high metastatic potential, and neoplastic cells show marked atypia with high mitotic rate. Conversely, the superficial forms are seen within subcutaneous tissue with minimal atypia and low mitotic rate, and rarely metastasize.² Given the difference in locations, biologic behaviours and morphologic features, the superficial form (benign type) has been classified in the category of fibrohistiocytic tumours. The deep forms (malignant type) have been referred to as anaplastic sarcoma with giant cells, and categorized under undifferentiated/unclassified sarcomas. This also includes a group of sarcomas with various cellular origins, which may represent

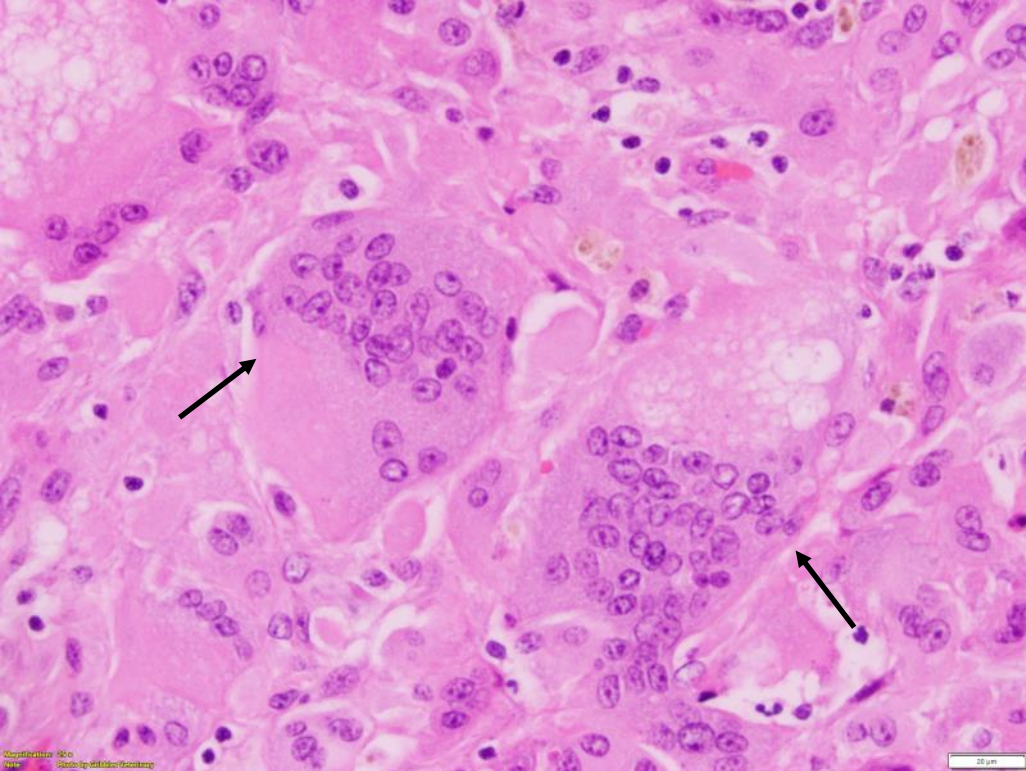


Figure 3: Histology from the mass lesion, demonstrating multinucleated giant cells (arrows)

anaplastic variants of different sarcomas (fibrosarcoma, myofibroblastic fibrosarcoma, liposarcoma, leiomyosarcoma, rhabdomyosarcoma, synovial cell sarcoma, histiocytic sarcoma, etc.).^{1,3}

In horses, GCTSP is a rare cutaneous neoplasm (approximately 1% of cutaneous neoplasms).⁴ The neoplasms are commonly seen in old horses (>10 years) and occur as solitary, raised, firm masses that may be ulcerated. They are predisposed to be present on the hind-limbs, but have also reported on the thorax, shoulder, abdomen, muzzle, and jugular groove.⁵

Cytologically, they are characterized by variable cellularity and a proliferation of spindle cells, with the presence of multinucleated giant cells that have multiple nuclei (up to 100 nuclei) and abundant basophilic tapered cytoplasm. An infiltrate of mixed inflammatory cells (neutrophils, macrophages, lymphocytes, and plasma cells) is commonly seen with evidence of chronic haemorrhage (e.g. macrophages with phagocytized RBCs or RBC breakdown products).

While the histogenesis of GCTSP is unclear, the majority of cases revealed positive

immunohistochemical staining for vimentin, which supports mesenchymal origin.¹

The metastatic potential is generally low and surgical excision is curative in most cases. However, local recurrence has been reported in the case of incomplete or minimal excision.⁵ In the present case, no overt evidence of neoplasm recurrence has been seen 15-months after surgery.

Thank you to Alex Fowler, Veterinary Associates Equine for this interesting case.

References:

1. Cian, F., Whiteoak, S., Stewart, J. A case of giant cell tumour of soft parts in a horse. *Vet Clin Pathol*, 45:501-504, 2016.
2. Zimmerman, K., Almy, F., Saunders, G. et al. An unusual case of giant cell tumor of soft parts in an America Warmblood horse. *Open Veterinary Journal*, 9:44-48, 2019.
3. Gross, T.L., Ihrke, P.J., Walder, E.J., et al. Other Mesenchymal Tumors. In: *Skin diseases of the dog and cat, clinical and histopathologic diagnosis* 2nd ed, pp. 806-810, Blackwell Science Ltd., Oxford, 2005.
4. Schaffer, P.A., Wobeser, B., Martin, L.E., et al. Cutaneous neoplastic lesions of equids in the Central United States and Canada: 3351 biopsy specimens from 3272 equids (2000-2010). *J Am Vet Med Assoc*. 242:99-104, 2013.
5. Walton, R.M., Cowell, R.L., Valenciano, A.C. (2021): Cytology of Cutaneous and Subcutaneous Lesions. In: *Equine hematology, cytology, and clinical chemistry* 2nd ed, pp. 161-193, Wiley Blackwell, Hoboken.

New laboratory manager

Gribbles Veterinary is very pleased to welcome Daniel Westlake to the team as the new Laboratory Manager for our Christchurch laboratory.

Dan grew up in mid-Wales and completed an honours degree in analytical chemistry from the University of Plymouth. He then spent several years working in laboratories in the UK before moving to Christchurch with his wife in 2009.

Dan continued his career in the scientific industry in New Zealand, working in technical

support and sales roles for laboratory instrumentation suppliers. He subsequently lead a team to establish a new laboratory in Dunedin, managed a laboratory business in Christchurch and was the director of a scientific instrument supply business.

Dan and his wife Sophie live in Sumner with their two young children. Dan is a keen mountain biker and he really enjoys opportunities to get out for bike rides with his family. He is also studying towards an MBA at the University of Canterbury, so it seems there is always a lot going on!



Customer satisfaction survey

Thank you to everyone who has taken the time to complete our customer satisfaction survey. Your feedback means a lot to us and will help us tailor our services to meet your needs.

If you haven't yet had your say, please [follow this link to the survey](#) and let us

know what you think. It will only take about five minutes of your time and is available until the end of August.

You will also have the opportunity to leave your contact details so we can get in touch should you have something in particular to discuss.

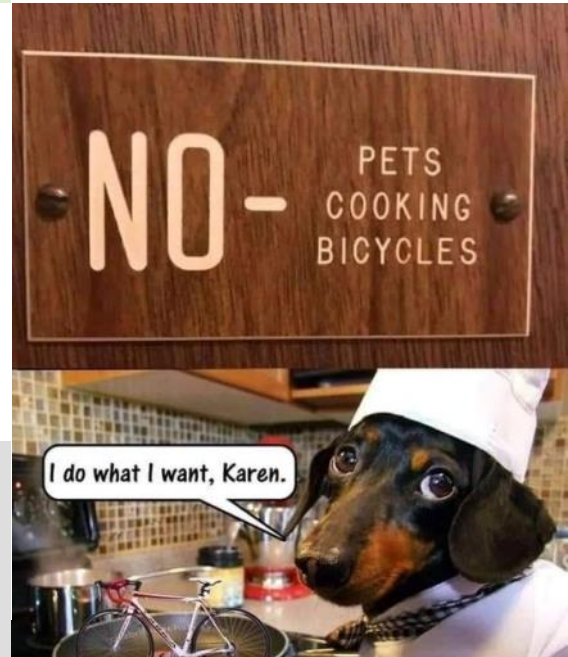
For a laugh!

If you follow us on Facebook, you'll be familiar with our regular Friday post. Here's the most popular one from the past month.

... and if you don't follow us, [head over](#) and hit the LIKE button now and never miss out on an update again.



Price book update: Cyclosporin testing has increased in price to \$30.20 (ex. GST). You can contact our [Marketing Administrator](#) at any time for an up-to-date electronic copy of our price book.



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