

Paws claws and judder things



May 2023

Bonfires and calves

MICHAEL HARDCASTLE

Clinical history

Three Hereford weaners showed signs of staggering, hypermetria or recumbency and two died; one recovered with supportive care. There was possible access to cholecalciferol or cyanide, but the clinical signs were not considered consistent with those intoxications. The weaner mob had been kept in a paddock where rubbish had recently been burned.

Laboratory findings

Serum chemistry on three more sick animals showed a marked azotaemia (creatinine up to 1127 $\mu\text{mol/L}$, reference interval 39-181; urea up to 59.9 mmol/L , reference interval 2.7-11.9).

Possible causes considered at this stage included acorn toxicity, *Amaranthus retroflexus* (redroot/pigweed), fluoride toxicity

(superphosphate exposure), aminoglycoside toxicity, oxalate toxicity, leptospirosis and heavy metals such as arsenic. Samples of liver from two animals showed arsenic concentrations considered to be significant (12.5 and 8.7 mg/kg); histopathology of the kidney from the latter animal showed haemorrhage and multifocal tubular necrosis.

Discussion

Most arsenic toxicity is via ingestion, as in this case with the presumed source being ash from the bonfire. Classically, burned tanalised fencing material treated with arsenic has been considered a common source on farms, with soil contaminated by arsenical dips, fungicides and herbicides also being a possible source. Arsenic inactivates the sulphhydryl groups on oxidative enzymes causing injury to multiple organ systems (e.g. GI tract, liver, kidneys, spleen, lungs). Small blood vessels are

particularly sensitive to damage.

Clinical signs range from peracute death and abdominal pain, to neurological signs such as depression, convulsions, staggering and collapse; to shock, thirst, salivation, ruminal atony and gastroenteritis. Treatment options are limited but rehydration is important, since affected animals are often very dehydrated.

Thank you very much to Warkworth Veterinary Services for submitting this interesting case and permitting its publication.

Arsenic toxicity is diagnosed sporadically at Gribbles Veterinary and it is worth remembering that this substance is still present in the environment and on farm, despite decreasing use (e.g. in the timber industry).



Mastitis toolbox

Mastitis is estimated to cost the New Zealand dairy industry approximately \$180 million a year.¹ Our new mastitis toolbox will enable you to reduce the cost of mastitis, by detecting cows with clinical and subclinical mastitis early allowing you to make informed treatment decisions.

The toolbox contains new tests together with trusted existing methods, providing you with the right tools to use in any farming situation. Sample types, testing turn-around times and pricing can be found in the latest version of our 2023 price book.

“StaphGOLD” - *Staphylococcus aureus* antibody ELISA

- Detects cows with milk antibodies against *S. aureus* (as a result of infection)
- Ideal as a screening test for cows with

elevated SCC before dry-off² and in early lactation

- Test not affected by intermittent shedding
- Aseptic sample not required

Multi-mastitis PCR panel

- Identification of 4 main pathogens:
 - > *Staphylococcus aureus*
 - > *Streptococcus uberis*
 - > *Streptococcus dysgalactiae*
 - > *Streptococcus agalactiae*
- Detection of staphylococcal β -lactamase penicillin-resistance genes
- Ideal for complex cases

Staphylococcus aureus PCR

- Sensitive direct detection of *S. aureus*
- Ideal for early detection of infection

Standard culture

- Identification of a wide range of pathogens
- Ideal for clinical mastitis cases

Standard culture + antibiotic sensitivity testing

- Identification of resistant pathogens by testing against a wide range of antibiotics
- Ideal support for treatment choice

For more information talk to your Gribbles Veterinary Territory Manager today on 0800 GRIBBLES.

References:

1. Dairy NZ
2. Yang D, Laven R. Performance of the StaphGOLD ELISA test in determining subclinical *Staphylococcus aureus* infections in dairy cows using a Gaussian mixture model. *Vet. Med. Sci.* 8:1632-1639, 2022



A new series of free virtual learning sessions!

Gribbles Veterinary and Lincoln Institute are again collaborating to provide a complimentary virtual learning series for veterinary clinic staff throughout New Zealand.

Each online event will combine a punchy and impactful pathology topic with a non-clinical professional mastery topic to compliment the technical content. The outcome of this series is to make your job both a little easier and a lot more fulfilling.

Session 1 “How to diagnose the cause of sudden death in companion animals” is

on May 18, 2023 at 1:00pm.

Expert Gribbles Pathologist Cathy Harvey unpacks what to do when presented with a case of unknown sudden death. Case examples will be given to show that a thorough history and gross autopsy will often give an answer as to why an animal dies suddenly, and what samples to take if you cannot.

Cathy’s presentation will be backed-up by Lincoln Institute’s Gary Turnbull who will be sharing some easy to use strategies for you to manage those challenging conversations

with upset, stressed and unhappy clients. Managing clients’ expectations around clinical outcomes and costs of treatment is a major source of stress and anxiety for veterinarians. You will also learn simple techniques to better manage your own emotional responses to stress, placing you in a superior state of mind to successfully manage these potentially volatile interactions with ease.

[Follow this link to learn more and register](#)

Roll with the punches

GEOFF ORBELL

When taking skin biopsies for alopecic conditions in animals, there are a few key points that can improve your chances of a diagnostic biopsy.

The most important factor for alopecic skin biopsies is being able to determine the orientation of the hair follicles as we need to assess the entire length of the follicle to determine where the problem is occurring.

1. Take 8mm punch biopsies

This allows us to bisect the biopsy along the direction of hair growth for optimal sectioning (Figure 1).

2. Biopsy the centre of alopecic areas, not the margin

Animal hair follicles are angled to trap air for insulation, therefore biopsies taken

from the margin of alopecic/haired skin might include actively growing hair bulbs from adjacent normal skin that might mislead the pathologist.

3. Draw a line/arrow on the skin to be biopsied

Understandably when there are no hairs in the biopsy, it is pretty hard for us to orientate the biopsies correctly for sectioning.

- > Use a narrow-nib permanent marker e.g. Sharpie, to indicate the direction of hair growth (Figure 2).
- > If done correctly, the line will appear in the centre of your biopsy (Figure 3).

4. Don't surgically scrub biopsy sites

As with all skin biopsies, scrubbing can remove scale and crusts which can be useful histologically.

5. Use a new skin punch

In alopecic conditions the skin can often be quite fragile, therefore using a new biopsy punch in every patient will minimise the chance of any shearing artefacts on histology.

6. Elevate the biopsy from underneath

Often the punch biopsy remains attached to the patient. In alopecic areas there are no hairs to grab to pull the biopsy out and the temptation is to use rat tooth forceps to grab the biopsy. This causes a crush artefact seen histologically which can render the biopsy useless

- > Avoid this by elevating the biopsy from underneath using closed curved forceps, a dental probe or needle.

Figure 1. 8mm punch biopsy.



Figure 2. Mark skin to indicate direction of hair growth.



Figure 3. Marked line will be in centre of biopsy.



Photo credit: Mayo Foundation

Let us know what you think!

From time to time we carry out customer satisfaction and other surveys to help us understand what is working across our business and what isn't, giving us the opportunity to improve on the negative and double down on the positive.

We are currently conducting a survey to find out the type of in-clinic analysers you use, how often you use them, which diagnostic laboratories you use and the key drivers for your choices. Results from this survey will provide an overview of the diagnostic services in play, enabling us to better plan for the future in a way that suits your clinic's

needs.

We value your input, so if you would like to participate in this survey [please follow this link](#). The survey will take approximately four minutes to complete.

Thank you for taking the time to help us improve the service we provide to you!

If you have any questions or would like to discuss this further, please just get in touch with your local Territory Manager on 0800 GRIBBLES.



Are you doing it online?

We've had a great response to our drive to move all consumable ordering online! Have you made the switch yet?

We are phasing out the consumables order form this year and moving everyone to ordering via our online platform. Once you've registered for an online user account, placing orders is a breeze! Here are a shopping list of reasons to make the switch:

- > There is a handy link to consumables ordering on the home page of our website;
- > Clear instructions are provided to register for an online user account;
- > There are FAQs to cover all bases in case you get stuck or have any issues;
- > You can view all the details your clinic needs to know about your orders and account set-up. Plus you can view all orders placed, manage your shipping address, update your account details and edit your password;
- > No payment details are required when placing orders. All charges will be processed with your end-of-month accounts;
- > If required, purchase order numbers can be placed into the comments box when placing the order;
- > A single user account can be set up for all staff at the clinic to access or clinic staff can set up separate accounts, it's entirely your choice.

The hard-copy order form will not be available after 30 June 2023, so next time you want to place an order, please visit our website first and get set up - www.gribblesvets.co.nz.

In brief

- > **If you missed out on our new price book**, [download a copy here](#). The new prices are effective 1 May.
- > **We need your help!** We are updating the feline and canine reference intervals for our new state-of-the-art haematology analysers. In addition, we are working on reference intervals for new assays in development and new methods for existing assays. If you would like to help by providing samples for this study, [click here to find out what you need to know](#).
- > **The ACTH promo for PPID** is running until 16 June. Boehringer will be delivering vouchers to clinics to use, so if they haven't be in touch let them know. Please remember to submit your completed voucher with your samples, otherwise the free testing will not be possible.
- > Don't forget that **FECRT submission forms** are available for download from our website. These forms ensure we have all the appropriate information required for generating the drench resistance report. [Find them here](#).



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VETERINARY



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Contacting Gribbles Veterinary couldn't be easier.

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