



Common seal pup 'mouth rot' investigation

Information for veterinary practices

There is currently an ongoing investigation into an outbreak of disease affecting common seal pups in the UK. The investigation is being led by representatives from the charity 'British Divers Marine Life Rescue' and Dr. Jamie Bojko of Teesside University, with support from the Cetacean Strandings Investigation Programme. It is backed by government funding.

Background

The disease is characterised by:

- Muzzle swelling
- Abscesses/wounds around the lips and muzzle
- Ulcerations within the oral cavity, with the hard palate most frequently and severely affected
 - Hard palate ulcerations can become severe and extensive, progressing to palatine bone exposure, osteomyelitis, bone necrosis, oro-nasal fistulae formation, and sepsis

This is a condition that has been observed for many years in common seal pups. It was assumed to be a result of newly weaned pups mouthing inappropriate objects (such as rocks) as they learnt to forage, resulting in trauma to the mouth and the introduction of infection. However, in recent years we have seen a rise in case numbers, and a large proportion of pups so severely affected that they have required emergency euthanasia due to compromised welfare.

What are the aims of the investigation?

As a result of our work, we hope to identify the cause of this condition and attempt to understand why case numbers have increased, how to better care for affected pups in rehabilitation, and whether it poses a threat to common seal conservation- and if it does, if we can do anything to help manage the condition.

The investigation so far

During the 2021-2024 common seal pupping seasons, information about each observed case of mouth rot was recorded, and samples from pups that had sadly died or were euthanased due to the severity of their condition, collected for analysis.

Initial results have shown cases being reported primarily up and down the east coast, with Norfolk appearing to be a hot spot. Why this is the case is not yet known.

Work in the lab under Dr Jamie Bojko at the National Horizons Centre, Teesside University, points towards a complex viral and bacterial complement underlying the cause for 'mouth rot'. So far,

some of the possible key pathogens have been identified, and now work is ongoing to demonstrate that these pathogens are indeed causing the observed disease. Further data and sample collection is needed to continue advancing our understanding of this condition, both epidemiologically and pathologically.

How you can help

The support of veterinary practices is greatly appreciated.

If a pup presents with the above signs (one or multiple) please complete the data collection form available on our website (<https://bdmlr.org.uk/common-seal-mouth-rot-project>). A PDF version of the data collection form is now available and can be filled in digitally. Each pup in the study gets assigned a research number, if a BDMLR medic brought the pup to you they should already have a number for the pup. If they are not a BDMLR medic, call the BDMLR hotline on 01825 765546 to obtain a number. Photos are also very useful, and the form details where to send them.

The form also gives advice on how to manage pups with milder forms of the disease, and when we would suggest euthanasia. If euthanasia is necessary, it would be extremely valuable if you could take the tissue samples and swab described (the data collection form also contains the sampling protocol). The samples stored in ethanol are critically important. We are aware not all practices have ethanol in such high concentrations, so if you would like a sampling pack for this study, please email mouthrotproject@bdmlr.org.uk and we will get one sent out to you. Otherwise, in an emergency surgical spirit (the highest purity you have) is acceptable.

Questions?

If there are any questions at all about the study, please do not hesitate to contact the investigation team at mouthrotproject@bdmlr.org.uk. For more urgent advice, please contact the BDMLR hotline directly (01825 765546), so they can put you in touch with a member of the investigation team directly.

Thank you

Thank you very much for your assistance with this important project. We are aware how busy veterinary practices are at the moment, and we are very grateful for your time. Any information/samples gathered from these pups will be used to help determine the cause of this concerning disease and how it might be best managed in the future.

With warm regards,



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