



# THE UNIVERSITY *of* EDINBURGH

## Edinburgh Research Explorer

### **Aelurostrongylosis in a young kitten in the UK**

**Citation for published version:**

Dobromylskyj, M, Elsheikha, HM & Gunn-Moore, D 2019, 'Aelurostrongylosis in a young kitten in the UK' *Veterinary Record*, vol. 184, no. 8, pp. 257. DOI: 10.1136/vr.l764

**Digital Object Identifier (DOI):**

[10.1136/vr.l764](https://doi.org/10.1136/vr.l764)

**Link:**

[Link to publication record in Edinburgh Research Explorer](#)

**Document Version:**

Publisher's PDF, also known as Version of record

**Published In:**

*Veterinary Record*

**General rights**

Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

**Take down policy**

The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact [openaccess@ed.ac.uk](mailto:openaccess@ed.ac.uk) providing details, and we will remove access to the work immediately and investigate your claim.





# Letters & Notices

## FELINE DISEASE

### Aelurostrongylosis in a young kitten in the UK

WE would like to bring to the attention of readers a case of fatal lungworm infection in a very young kitten in the UK.

In December 2018, postmortem lung samples from an 11- to 12-week-old male kitten were submitted for histopathological assessment. The clinical history was of sudden dyspnoea and death. Microscopic examination of the lung revealed numerous metastrongyloid lungworms within the majority of alveolar spaces and smaller airways (Fig 1). Quantitative PCR (CTDS Laboratories) analysis of formalin-fixed paraffin-embedded tissues confirmed the diagnosis of *Aelurostrongylus abstrusus* (with a very low cycle threshold level, ie, extensive infection). The severity of the infection and the young age of the kitten prompted a request for further history.

The kitten was one of six from a feral colony in Wales. The kittens were removed by a rescue charity on 31 October 2018, at approximately six weeks of age, and treated with a single dose of topical fipronil, (S)-methoprene, praziquantel and eprinomectin (Broadline; Boehringer Ingelheim/Merial). None of the kittens was unwell while in the charity's care,

but two other kittens developed signs of respiratory disease after rehoming; one of which died. The kitten described here was rehomed on 27 November and died on 11 December.

How this kitten became heavily infected despite treatment with Broadline remains unclear. However, based on reported efficacy of 90.5 per cent for *A abstrusus*,<sup>1</sup> a second treatment with Broadline or another suitable anthelmintic drug after one month is required to guarantee all parasites are killed. Also, it is possible that some larvae were dormant or unresponsive to treatment and that killing all other parasite stages and/or immunosuppression caused by a concurrent infection might have stimulated emergence of these in refugia larvae. This would explain why the worms in the histopathological examination appeared to be nearly the same size (Fig 1).

Our findings also suggest that *A abstrusus* may cause a serious and potentially fatal lungworm burden in kittens at a young age in the UK. This result agrees with a previous report describing pulmonary hypertension associated with lungworm infection in a 10-week-old kitten from The Netherlands.<sup>2</sup> The presence of two litter mates who also displayed respiratory signs (of undetermined cause) might suggest a common source of infection. The potential for vertical transmission from queen to litter is suggested by a study in Italy,

“***Aelurostrongylus abstrusus* may cause a serious and potentially fatal lungworm burden in kittens at a young age in the UK**”

which found *Troglostrongylus brevior* lungworm in kittens of less than one month of age.<sup>3</sup> Although this has not been documented in *A abstrusus*, the possibility that kittens in this litter might have acquired infection directly from their mother, through the placenta or via milk, cannot be excluded.

Taken together, these findings suggest that early diagnosis and prompt treatment with repeated doses of an effective licensed product is essential to prevent exacerbation of the lungworm disease in young kittens.

**Melanie Dobromylskij**, Finn Pathologists, Mayflower Way, Harleston, Norfolk IP20 9EB

**Hany M. Elsheikha**, School of Veterinary Medicine and Science, University of Nottingham, Sutton Bonington Campus, Leicestershire LE12 5RD

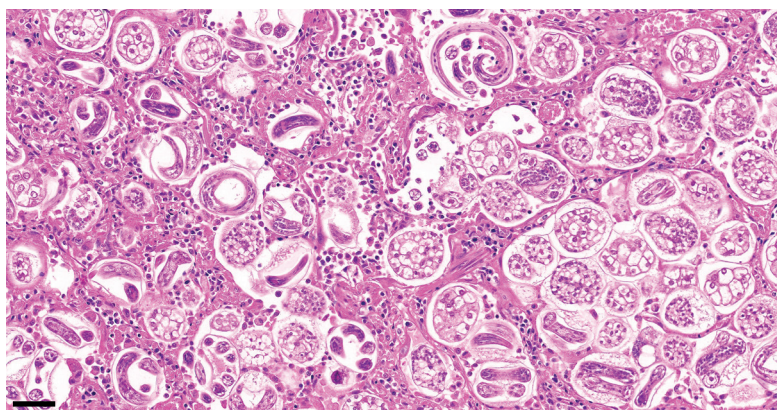
**Daniëlle Gunn-Moore**, Royal (Dick) School of Veterinary Studies and The Roslin Institute, University of Edinburgh, Easter Bush Campus, Midlothian EH25 9RG

email: danielle.gunn-moore@ed.ac.uk

#### References

- 1 Giannelli A, Brianti E, Varcasia A, et al. Efficacy of Broadline® spot-on against *Aelurostrongylus abstrusus* and *Troglostrongylus brevior* lungworms in naturally infected cats from Italy. *Vet Parasitol* 2015;209:273–7
- 2 Dirven M, Szatmári V, van den Ingh T, et al. Reversible pulmonary hypertension associated with lungworm infection in a young cat. *J Vet Cardiol* 2012;14:465–74
- 3 Traversa D, Salda LD, Diakou A, et al. Fatal patent troglostrongylosis in a litter of kittens. *J Parasitol* 2018;104:418–23

doi: 10.1136/vr.l764



**Fig 1: Granulomatous pneumonia with larvae and numerous morulated and embryonated eggs, typical of *Aelurostrongylus abstrusus*, in lung samples from an 11- to 12-week-old kitten. Bar 50 µm**