

Guideline

Snail and slug ingestion - Prophylaxis against *Angiostrongylus cantonensis* infection

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Applicable to	All Children's Health Queensland Clinical staff				
Authorisation	Executive Director Clinical Services				

Purpose

This guideline outlines recommendations for prophylactic anti-parasitic treatment for patients presenting with a history of snail or slug ingestion.

Scope

This guideline is applicable for all paediatric cases of snail and slug ingestion being managed in Queensland.

Related documents

Procedures, Guidelines, Protocols

- [CHQ-PROC-01036 Antimicrobial: Prescribing and Management](#)
- [CHQ Antimicrobial Restriction list](#)

Guideline

Background

- *Angiostrongylus cantonensis*, the Rat Lung Worm is a parasitic nematode present in a number of regions in the world, including Australia.
- To date, cases acquired in Australia are currently confined to the states of Queensland and New South Wales. Given that *A. cantonensis* is currently limited to these states, at this time we would only

recommend consideration of prophylaxis following slug ingestion from these Australian states or from an endemic country (particularly Asia-Pacific regions) (1, 2).

- Snails and slugs host larvae that then infect rats.
- Humans can become infected with larvae by ingesting snails or slugs; these larvae migrate to the brain causing eosinophilic meningitis / neuroangiostrongyliasis.
- Neuroangiostrongyliasis severity varies depending on number of larvae ingested; it can be mild but can be progressive, and can lead to disability or death.
- Early prophylactic treatment aims to kill the parasite before or as it enters the central nervous system (CNS) and is likely effective if given up to two weeks post- ingestion.
- Giving anti-helminthic treatment after the larvae have entered and multiplied in the CNS can theoretically worsen the illness, and should be avoided.
- Albendazole is the preferred anti-helminthic because it has better systemic absorption than other drugs in its class.
- There are gaps in evidence for albendazole dosing as prophylaxis. The dosing recommendations in this guideline are based on expert opinion and extrapolations from clinical studies that are limited to the treatment of eosinophilic meningitis caused by *Angiostrongylus cantonensis*.

Recommendation

If a child has been observed, or is strongly suspected to have ingested part or all of a snail or slug, early treatment (**ideally within 7 days of exposure, but not beyond 14 days of exposure**) with:

- Oral Albendazole 20 mg/kg (maximum 400 mg/dose) once daily *for 7 days*.
 - Infants and children older than 6 months of age only.
 - For ease of administration, round calculated dose to the nearest multiple of 100 mg.
 - Tablets can be taken whole, chewed or crushed.
 - Doses can / should be taken with food (increases systemic absorption).
- Albendazole (Zentel™ 200 mg available as chewable scored tablet) is available on the Queensland Hospitals List of approved medicines. Availability from community pharmacies may vary.

Consultation

Key stakeholders who reviewed this version:

- Paediatric Infection Specialists, Infection Management Prevention Service
- Director, Infection Management Prevention Service, Immunology and Rheumatology
- Pharmacist Consultant, Queensland Poisons Information Centre
- Pharmacist Advanced, Antimicrobial Stewardship
- Chair of CHQ Medicines Advisory Committee – endorsed xx/xx/2024

References and suggested reading

1. Wang QP, Lai DH, Zhu XQ, Chen XG, Lun ZR. Human angiostrongyliasis. *Lancet Infect Dis*. 2008 Oct;8(10):621-30.
2. Berkhout A, Procriv P, Herbert A, Anthony LT, Nourse C. Two cases of neuroangiostrongyliasis: A rare disease because rarely considered or rarely diagnosed? *J Paediatr Child Health*. 2019 Dec;55(12):1463-1469.
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4. Diao Z, Wang J, Qi H, Li X, Zheng X, Yin C. Treatment of angiostrongyliasis using a combination of albendazole and dexamethasone: the results of a retrospective and comparative study. *Annals of Tropical Medicine & Parasitology*. 2011;105(1):65-69.
5. Chotmongkol V, Kittimongkolma S, Niwattayakul K, Intapan PM, Thavornpitak Y. Comparison of Prednisolone Plus Albendazole with Prednisolone Alone for Treatment of Patients with Eosinophilic Meningitis. *The American Journal of Tropical Medicine and Hygiene*. 2009; 81(3):443-445.
6. The Sydney Children's Hospital Network, Snail and Slug Ingestion. Available at: https://www.schn.health.nsw.gov.au/_policies/pdf/2018-163.pdf

Guideline revision and approval history

Version No.	Modified by	Amendments authorised by	Approved by
1.0 14/06/2016	Dr Vikram Vaska (IMPS) Nicolette Graham (AMS)	CHQ Medicines Advisory Committee	Executive Director Medical Services
2.0 09/04/2019	Infection Specialists (Infection Management and Prevention Service, CHQ) Antimicrobial Stewardship Pharmacist (CHQ)	CHQ Medicines Advisory Committee	Executive Director Clinical Services (QCH)
3.0 23/07/2021	Infection Specialists (Infection Management and Prevention Service) Clinical Pharmacist Lead, Antimicrobial Stewardship	Director, Infection Management and Prevention Service, Immunology and Rheumatology	Divisional Director Medicine
4.0 01/02/2024	Infection Specialists (Infection Management and Prevention Service) Pharmacist Advanced, Antimicrobial Stewardship	Director, Infection Management and Prevention Service, Immunology and Rheumatology	Divisional Director Medicine

Keywords

Snail, slug, ingestion, paediatric, *Angiostrongylus cantonensis*, rat lung worm, albendazole, eosinophilic meningitis, antihelmintic agent, prophylaxis, 01219

Accreditation references

NSQHS Standards (1-8): 3 Preventing and Controlling Healthcare Associated Infections, 4 Medication Safety