Supplementary Table 1 Summary of Angiostrongylus cantonensis Meningoencephalitis Cases in Children Under 2 Years of Age

Comprehensive literature review (1997–2024) with detailed treatment regimens

Ref.	Year	Country	Age	Clinical Presentation	Corticosteroid Regimen	Anthelmintic Regimen	Outcome
FATAL OUTCOME (n = 3)							
Graber et al. [1]	1997	Mayotte	11 mo	Seizures, coma, flaccid quadriplegia, areflexia, sphincter disturbance	None	None	Fatal (3 weeks; neurovegetative disturbances)
Cooke-Yarborough et al. [2]	1999	Australia (Fiji exposure)	11 mo	Flaccid quadriparesis, dysaesthesia, progressive bulbar dysfunction	IV methylprednisolone (dose NR); initial improvement, relapse after cessation	None	Fatal (day 41; bulbar dysfunction, respiratory failure)
Morton et al. [3]	2013	Australia (Sydney)	10 mo	Lethargy, decreased facial movements, hypotonia, areflexia, progressive weakness	Corticosteroids (dose NR)	Albendazole (dose NR); also received IVIG, imatinib	Fatal (day 27; autopsy confirmed A. cantonensis in brain, cord, lungs)
SURVIVED WITH SEQUELAE (n = 3)							
Morton et al. [3]	2013	Australia (Sydney)	14 mo	Fever, vomiting, dysconjugate eyes, intention tremor, bulging fontanelle, CSF eosinophilia 45%	Corticosteroids × 10 weeks (dose NR)	Albendazole (ceased due to transaminitis); EVD for hydrocephalus	Sequelae: Recurrent hydrocephalus requiring Rickham reservoir; persistent pleocytosis at 6 mo
Evans-Gilbert et al. [4]	2014	Jamaica	19 mo	Refusal to walk/crawl, excessive crying, fever, truncal ataxia, blood and CSF eosinophilia	IV dexamethasone 0.6 mg/kg/dose × 4 doses/day × 3 days; then oral prednisone 1 mg/kg/day × 4 weeks	Albendazole 10 mg/kg/day × 3 weeks	Sequelae: Residual neurological deficits at follow-up
Abe et al. [5]	2022	USA (Hawaii)	11 mo	Fever × 5 days, progressive ascending	IV methylprednisolone	Albendazole 150 mg/day × 6 weeks	Sequelae: Day 30 MRI showed new left frontal infarct, multifocal T2/FLAIR

Ref.	Year	Country	Age	Clinical Presentation	Corticosteroid Regimen	Anthelmintic Regimen	Outcome
				weakness; poor response to IVIG, quadriplegia requiring mechanical ventilation; CSF PCR+ and plasma mcfDNA NGS+	30 mg/kg/day × 16 days → tapered to 2 mg/kg/day × 2 weeks → oral prednisolone taper × 9 weeks (total 33 days IV + 9 weeks PO)		hyperintensities, medullary microhemorrhages. Discharged day 72. At 18 mo: proprioceptive abnormalities but normal language, social and fine motor skills. At 31 mo: walking, climbing, 2-3 word sentences, improved gross motor
COMPLETE RECOVERY (n = 11)							
Graber et al. [1]	1997	Reunion Island	10 mo	Persistent febrile vomiting, irritability, blood and CSF eosinophilia	None (supportive care only)	None	Complete recovery
Graber et al. [1]	1997	Reunion Island	11 mo	Febrile vomiting, irritability, unilateral VI nerve palsy, blood and CSF eosinophilia	None (supportive care only)	None	Complete recovery
Maurer et al. [6]	2001	USA (American Samoa)	10 mo	Fever, refusal to walk, eosinophilia, CSF pleocytosis with eosinophils	Corticosteroids (dose NR)	None	Complete recovery
Flerlage et al. [7]	2017	USA (Tennessee)	12 mo	18 days daily fever, irritability, decreased oral intake, emesis, CSF 36% eosinophils	Dexamethasone (dose NR); 3-week taper; serial LPs	Albendazole × 3 weeks (dose NR)	Complete recovery at 6-month follow-up
Ma et al. [8]	2018	China (Hainan)	15 mo	High fever × 3 wks, irritability × 2 wks, refusal to walk × 1 wk, CSF larvae and eosinophilia	Prednisone 1.5 mg/kg/day (17.5 mg qd) × 4 weeks	Levamisole 2.5 mg/kg/day (14 mg bid) × 4 weeks	Complete recovery at 6 mo; normal growth and development

Ref.	Year	Country	Age	Clinical Presentation	Corticosteroid Regimen	Anthelmintic Regimen	Outcome
Xie et al. [9]	2019	China (Guangdong)	15 mo	Cough × 1 mo, fever × 2 days, mental fatigue, poor diet, hypereosinophilia	Methylprednisolone 20 mg/day × 10 days	Albendazole 100 mg/day × 10 days	Complete recovery without relapse
Xie et al. [9]	2019	China (Guangdong)	19 mo	Cough × 1 mo, fever × 10 days, mental fatigue, poor diet, hypereosinophilia, abnormal MRI	Methylprednisolone 20 mg/day × 10 days	Albendazole 100 mg/day × 10 days	Complete recovery without relapse
Pham Thu et al. [10]	2020	Vietnam (North)	9 mo	Fever × 7 days, seizures, neck stiffness, ↑ICP; blood eosinophilia 16.1%, CSF 26% eosinophils; LIVE WORM visualized in CSF; ELISA+	IV dexamethasone 0.6 mg/kg/day ÷ q8h × 3 days → PO prednisolone 2 mg/kg/day × 5 days; also mannitol 1.5 g/kg/day × 3 days	Albendazole 200 mg/day × 2 weeks	Complete recovery after 12 days; MRI normalized
Cattaneo et al. [11]	2021	Mayotte	14 mo	Strabismus, psychomotor regression, axial hypotonia, hemiparesis, tetraventricular hydrocephalus, CSF eosinophilia 25%	IV methylprednisolone 1 mg/kg/day × 2 weeks → oral prednisolone taper; repeated large-volume LPs	Albendazole 15 mg/kg/day (duration NR)	Complete recovery at 1-month follow-up; normal neurological exam
Chancey et al. [12]	2024	USA (Florida-Orlando)	19 mo	Fever 103°F, 11 days malaise, refusal to walk, Kernig+, no spontaneous LE movement, geophagia history	IV methylprednisolone 2 mg/kg/day × 7 days → oral prednisone taper × 3 weeks	None (rapid improvement with steroids alone)	Complete recovery; at baseline at 3-month follow-up

Ref.	Year	Country	Age	Clinical Presentation	Corticosteroid Regimen	Anthelmintic Regimen	Outcome
Chancey et al. [12]	2024	USA (Florida-St. Petersburg)	8 mo	Vomiting × 6 days, lethargy, fever 103°F, left esotropia, CSF eosinophilia 41%, hypotonia, ataxia	IV methylprednisolone 2→5 mg/kg/day × 7 days → oral prednisone taper × 4 weeks; acetazolamide added	None	Complete recovery; at baseline at 6-week follow-up; required PT

Abbreviations: CSF = cerebrospinal fluid; EVD = external ventricular drain; IVIG = intravenous immunoglobulin; IV = intravenous; LP = lumbar puncture; LE = lower extremity; mcfDNA NGS = microbial cell-free DNA next-generation sequencing; mo = months; NR = not reported; PO = per oral; PT = physical therapy; wks = weeks.

Notes: This table includes only cases with confirmed or highly probable A. cantonensis infection in children <24 months of age (n = 17 cases from 12 publications). Cases are organized by outcome severity (fatal → sequelae → complete recovery), then chronologically by publication year. Standard anthelmintic dosing for neuroangiostrongyliasis: Albendazole 15 mg/kg/day (max 400 mg bid) × 2–3 weeks. Standard corticosteroid dosing varies: Methylprednisolone 1–2 mg/kg/day (conventional) to 10–30 mg/kg/day (pulse); Prednisolone/Prednisone 1–2 mg/kg/day; Dexamethasone 0.15–0.6 mg/kg/day.

Supplementary Table 2 Pediatric Cases Using High-Dose/Pulse Corticosteroids (10-30 mg/kg/day) for Treatment of A. cantonensis Meningoencephalomyelitis

No.	Ref.	Age/Sex	Country	Clinical Severity	High-Dose Corticosteroid Regimen	Anthelmintic	Outcome
1	Abe et al., 2022 [5]	11 mo/M	Hawaii, USA	Coma, complete quadriplegia, respiratory failure requiring mechanical ventilation, longitudinal myelitis C3-C7, cerebral hemorrhage, poor response to IVIG	IV Methylprednisolone 30 mg/kg/day × 16 days → 2 mg/kg/day × 2 weeks → oral prednisolone taper × 9 weeks (Total: 33 days IV + 9 weeks PO)	Albendazole 150 mg/day × 6 weeks	Good recovery with mild proprioceptive abnormality; discharged day 72; at 31 mo: walking, climbing, 2-3 word sentences

No.	Ref.	Age/Sex	Country	Clinical Severity	High-Dose Corticosteroid Regimen	Anthelmintic	Outcome
2	Chancey et al., 2024 [12]	10 yo/M	Tampa, Florida, USA	Coma, central apnea requiring mechanical ventilation, elevated ICP (OP 45 mmHg), obstructive hydrocephalus requiring EVD, abnormal brain MRI with FLAIR hyperintensity and leptomeningeal enhancement	IV Methylprednisolone 10 mg/kg/day × 5 days → tapered over 20 days with transition from IV to PO prednisolone at day 12	Albendazole 400 mg twice daily × 14 days	Complete recovery; extubated day 12, EVD removed day 18; discharged to inpatient rehabilitation day 22; returned to normal activities without gross neurological deficits
3	Defo et al., 2018 [13]	10 yo/M	French Guiana (Brazil origin)	Eosinophilic meningitis, transverse myelitis T2-T10, paraparesis of lower limbs, dysuria (urinary retention), CSF 92% eosinophils	IV Methylprednisolone 30 mg/kg/day × 5 days → oral prednisolone 2 mg/kg/day tapered over 1 month	Ivermectin 200 µg/kg/day × 10 days	Complete recovery; no sequelae at 3 months; MRI normalized by day 38

Key Observations:

- All 3 cases had severe presentations with neurological compromise (myelitis, coma, respiratory failure)
- High-dose pulse methylprednisolone (10-30 mg/kg/day) was used for 5-16 days, followed by tapering regimens
- All 3 patients achieved good to complete recovery despite initial severe presentations
- The most severely affected infant (Abe 2022) required the longest treatment duration (30 mg/kg/day × 16 days)
- Anthelmintic agents varied: albendazole (2 cases) and ivermectin (1 case)

Abbreviations: mo = months old; yo = years old; M = male; F = female; MV = mechanical ventilation; ICP = intracranial pressure; OP = opening pressure; EVD = external ventricular drain; IV = intravenous; PO = per oral; IVIG = intravenous immunoglobulin; CSF = cerebrospinal fluid; MRI = magnetic resonance imaging; FLAIR = fluid-attenuated inversion recovery.

Notes: This table includes pediatric cases where high-dose/pulse corticosteroid therapy (≥10 mg/kg/day methylprednisolone) was used. Standard-dose corticosteroid regimens (1-2 mg/kg/day) are not included. Pulse steroid therapy is typically reserved for severe cases with significant neurological involvement such as myelitis, encephalitis with altered consciousness, or respiratory compromise.

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