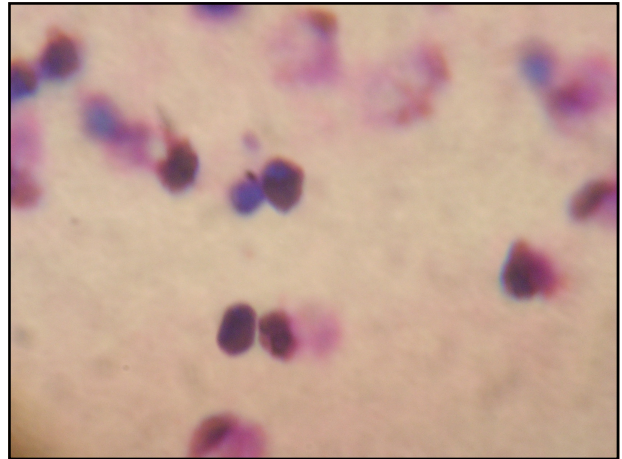


Current Management of Eosinophilic Meningitis

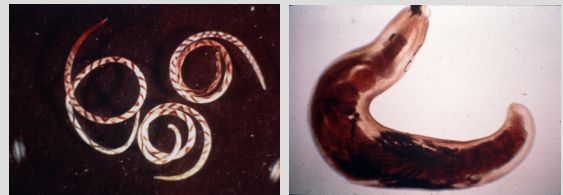
Somsak Tiamkao, M.D.
Department of Medicine
Faculty of Medicine
Khon Kaen University



EoM is not a disease

- Parasitic infestation
- Tuberculous meningitis
- Cryptococcal meningitis
- Syphilitic meningitis
- Carcinomatous meningitis
- Rheumatoid arthritis
- HIV infection

Parasitic infestation



Epidemiology

- Angiostrongyliasis
 - Thailand (NE)
 - Taiwan
 - Asia pacific
 - US
 - Oct – Feb.
- Gnathostomiasis
 - Japan
 - Thailand

Presenting symptoms

- Angiostrongyliasis
 - Headache (meningitis)
 - Ocular
 - GI ??
- Gnathostomiasis
 - Cutaneous (migratory swelling, larva migrans)
 - Neuro. (SAH, ICH, myelitis, meningitis, radicular pain,...)
 - Ocular

EOSINOPHILIC MENINGITIS



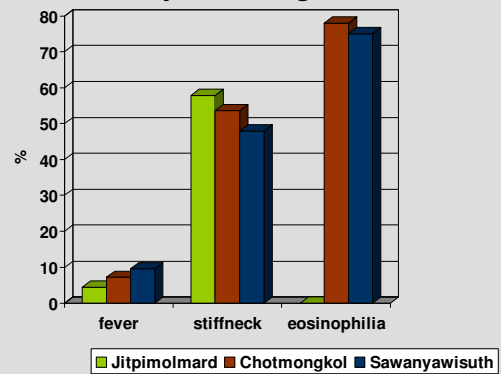
ภาพที่ 1. ผลการตรวจร่างกายผู้ป่วยมีลักษณะหลับตาได้ไม่สนิท มีก้นเขียวและบวมโตไม่เต็มที่.

ภาพที่ 2. หลังการรักษาในสี่ปอดที่ 4 อาการใบหน้าเริ่มเขียวของผู้ป่วยหายเกือบเป็นปกติ.

Clinical dx. of A. cantonensis

- Duration of headache
- Character of headache
- Incubation period
- Without history of raw snail

Physical signs



Laboratory findings

CSF analysis
Serology
CT & MRI

CSF



Parasite ?

CSF analysis

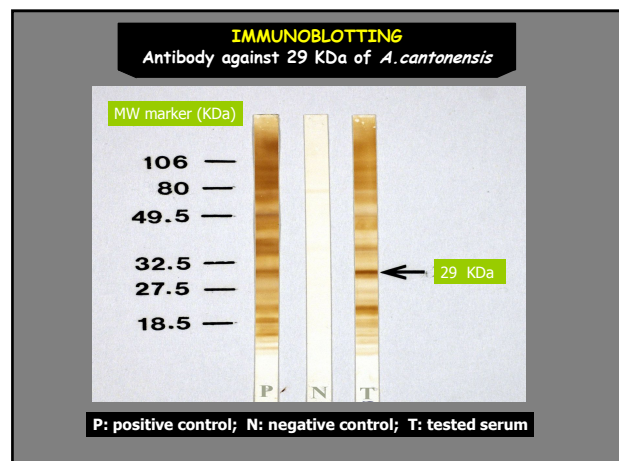
- Angiostrongyliasis
 - OP > 30 cm H₂O ~ 40 %
 - WBC < 5,000 cells/mm³
 - CSF protein < 500 mg/dl
 - CSF sugar > 50 %
 - Some cases CSF sugar < 50 %
- Gnathostomiasis
 - Xanthochromia
 - WBC < 1,000 cells/mm³

Serology

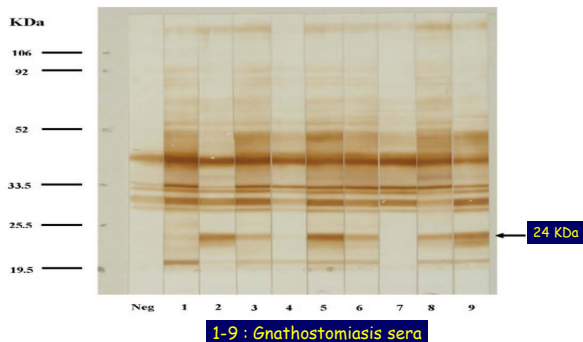
- Ab or Ag detection
- Immunoblotting or Western blot
- Indication
 - Study
 - Questionable cases
- Lab : Depart. Parasitology, KKU
0-4336-3432
- www.eosinophilic-meningitis.worldmedic.com

Angiostrongyliasis

- Immunoblotting : Ab detection
- 29 kDa diagnostic band
- Sensitivity : 56-100%
- Specificity : 95-100%



IMMUNOBLOTTING
Antibody against 24 KDa of *G. spinigerum*



MRI : cauda equina gnathostomiasis



Prior to treatment

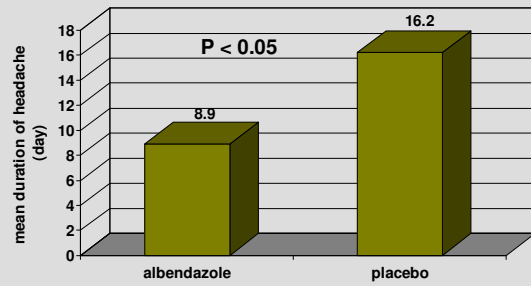
9 months F/U

Sawanyawisuth K, Tiamkao S, et al. (submitting)

Treatment

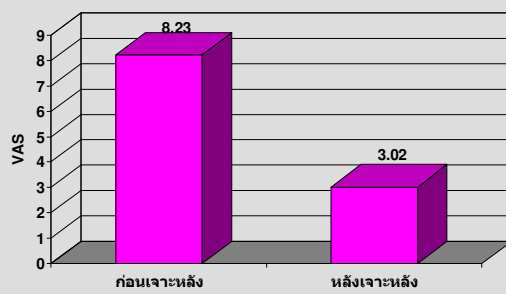
- *A. cantonensis*
 - Anti parasite
 - Lumbar puncture
 - Corticosteroids

Albendazole 15 MKD



Jitpimolmard, et al (submitting)

Lumbar puncture

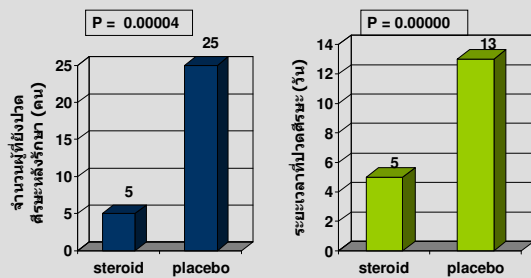


Sawanyawisuth, et al (submitting)

Corticosteroids

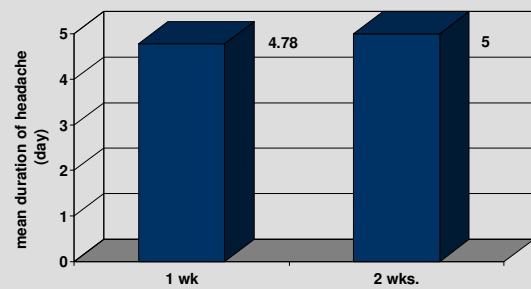
- Prednisolone 4*3, 2 weeks
- RCT

Corticosteroids 2 weeks



Chotmongkol, et al, CID, 2000.

Corticosteroid 1 & 2 weeks



Sawanyawisuth, et al. (submitting)

Corticosteroid 1 week

- Relapsed ~ 15 %
- Mostly less severe (VAS)

Side effect of corticosteroid

- No serious side effect :
UGIB, severe hyperglycemia

Suggestions

- Lumbar puncture in case of suspicious
- Prednisolone 4*3
 - 1 week : close follow up, advice
 - 2 weeks : without taper off
- Albendazole 15 MKD (option)

Ongoing study

- Predictive factor & duration of headache
- Severe cases : combine steroid & albendazole

Treatment

- Gnathostomiasis
 - Cutaneous : Albendazole 800 mg/d, 21 days
Ivermectin 0.2 MKD single dose
 - CNS : no definite treatment
 - F/U : eosinophilia (6 months)
: ELISA Ig G (12 months)