

NEUROCYSTOCERCOSIS IN AN OTHERWISE HEALTHY PATIENT: A CASE STUDY

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Case

- CC: persistent headaches
- HPI: 49-year-old male originally from Mexico presenting with 6-day history of intermittent headache refractory to OTC medications, nausea, dizziness, and difficulty walking
- ROS: Negative for neck stiffness, visual changes, AMS, seizures, cough, fever/chills.
- PMH: latent TB, L eye injury
- Family Hx: none
- Soc Hx: Moved from Mexico 9 yrs ago, works in construction, minimal EtOH use, no tobacco use, and no other illicit substances
- Meds: sertraline, mirtazapine, famotidine

Imaging

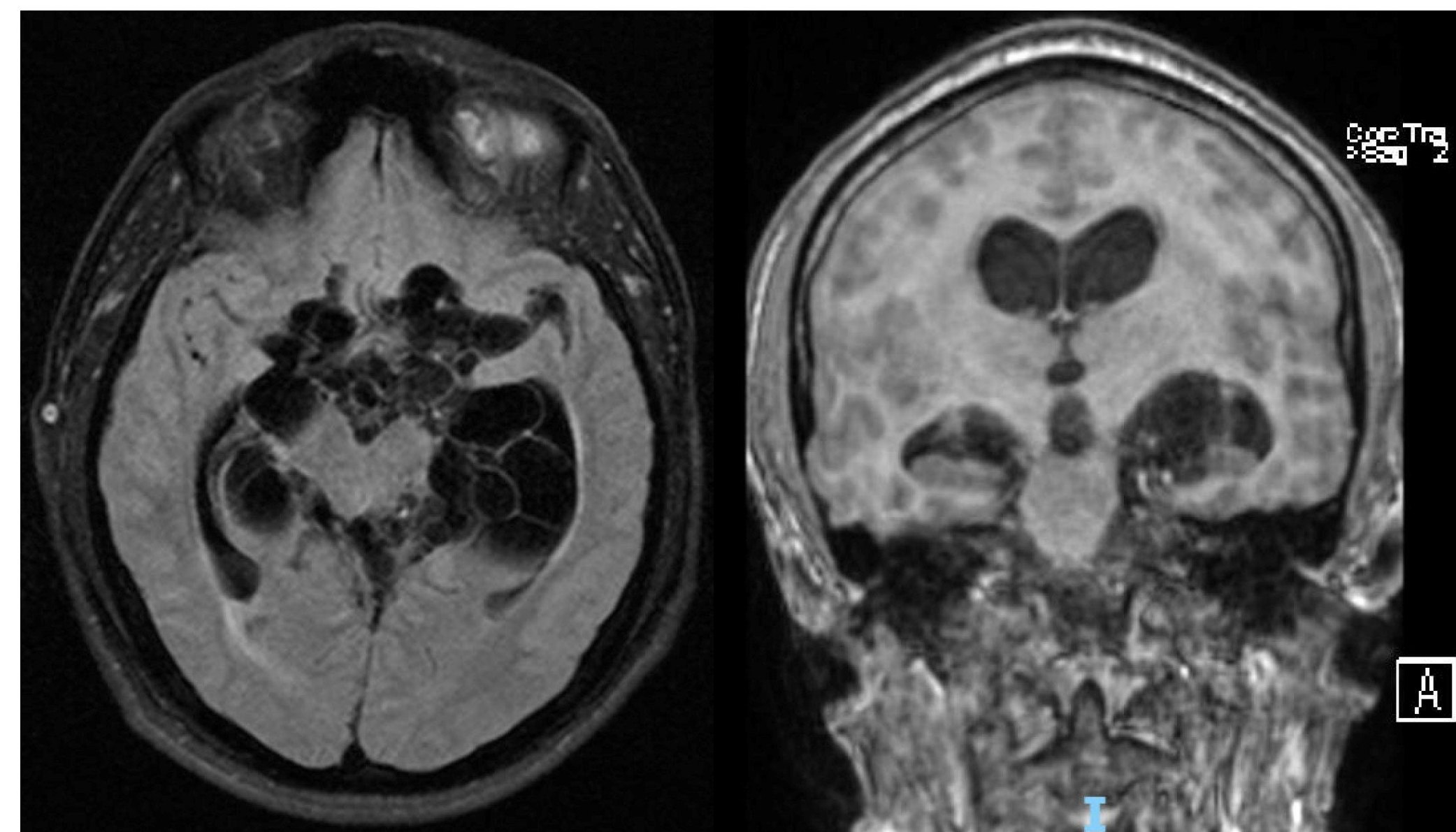


Figure 1: MRI T2 FLAIR imaging of the patient's head showed extra-axial loculated cysts at the level of the midbrain with associated ventriculomegaly. No conclusive lesions within the brain parenchyma were identified.

Clinical Manifestations

- Presenting symptoms depend largely on location of the cysts:
 - **Intraparenchymal:** Headache or seizures (most common, >60%)
 - **Extraparenchymal:** Symptoms of increased ICP such as headache, dizziness, nausea, and vomiting (less common, ~25%)
 - **Extra-neural:** Usually asymptomatic and tend to be detected incidentally

Discussion

- This case demonstrates the ways in which knowledge of the life-cycle and transmission of *T. solium* directly relate to its clinical presentation.
- Neurocysticercosis can often have a non-specific clinical presentation, so a broad differential must be considered.
- Given the global prevalence of neurocysticercosis and the presence of many patients who have immigrated from or visited endemic regions, NCC is an important part of the differential for acquired seizures and unexplained headaches.

Background

Organism:
Taenia solium (aka pork tapeworm)

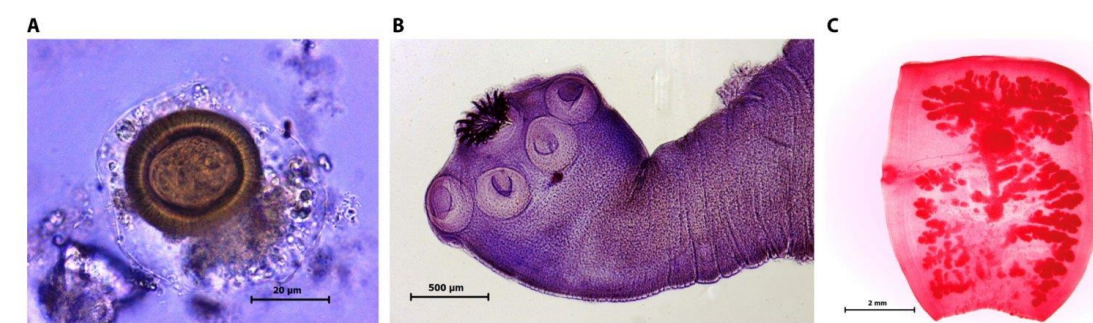


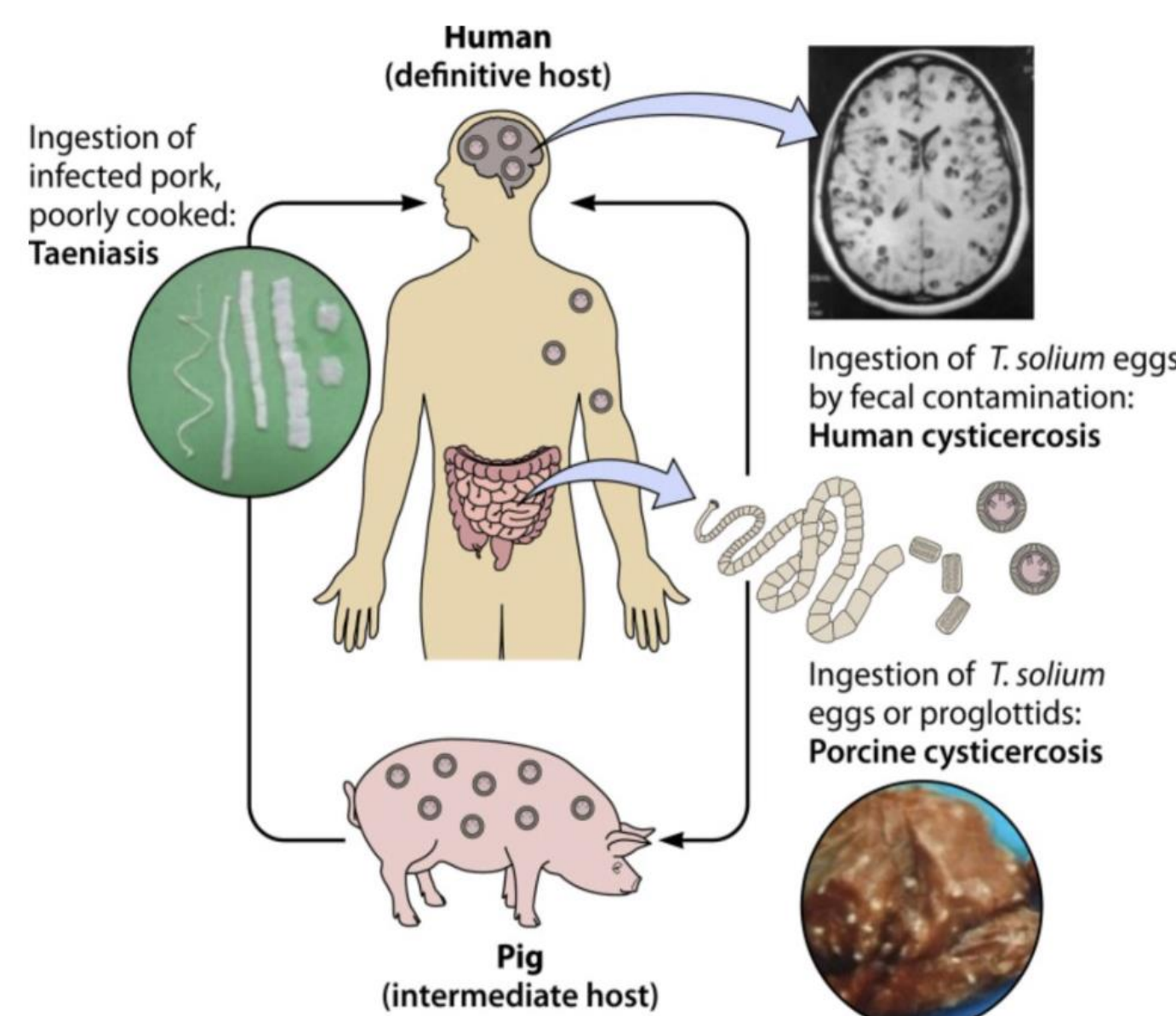
FIG 3. *Taenia solium*. (A) Egg; (B) scolex; (C) gravid proglottid. (All images courtesy of Juan Jimenez, Lima, Peru.)

Life cycle

Key takeaways:

- Ingestion of eggs = Neurocysticercosis (symptomatic)
- Ingestion of cysts = GI infection (almost always asymptomatic)

(Garcia 2020)



Epidemiology and Risk Factors

Risk factors & Epidemiology

-Health and Society

- *Taenia* is endemic in most of the world
 - Particularly prevalent in S. America, Africa, SE Asia.
 - Prevalence of NCC is estimated to be 10-20% in many of these areas (Prasad 2011, Fleury 2003, Moyano 2016)
- Risk factors include:
 - Living in rural communities where pigs roam freely
 - Living in areas where human fecal contamination of soil is common (Garcia 2020).

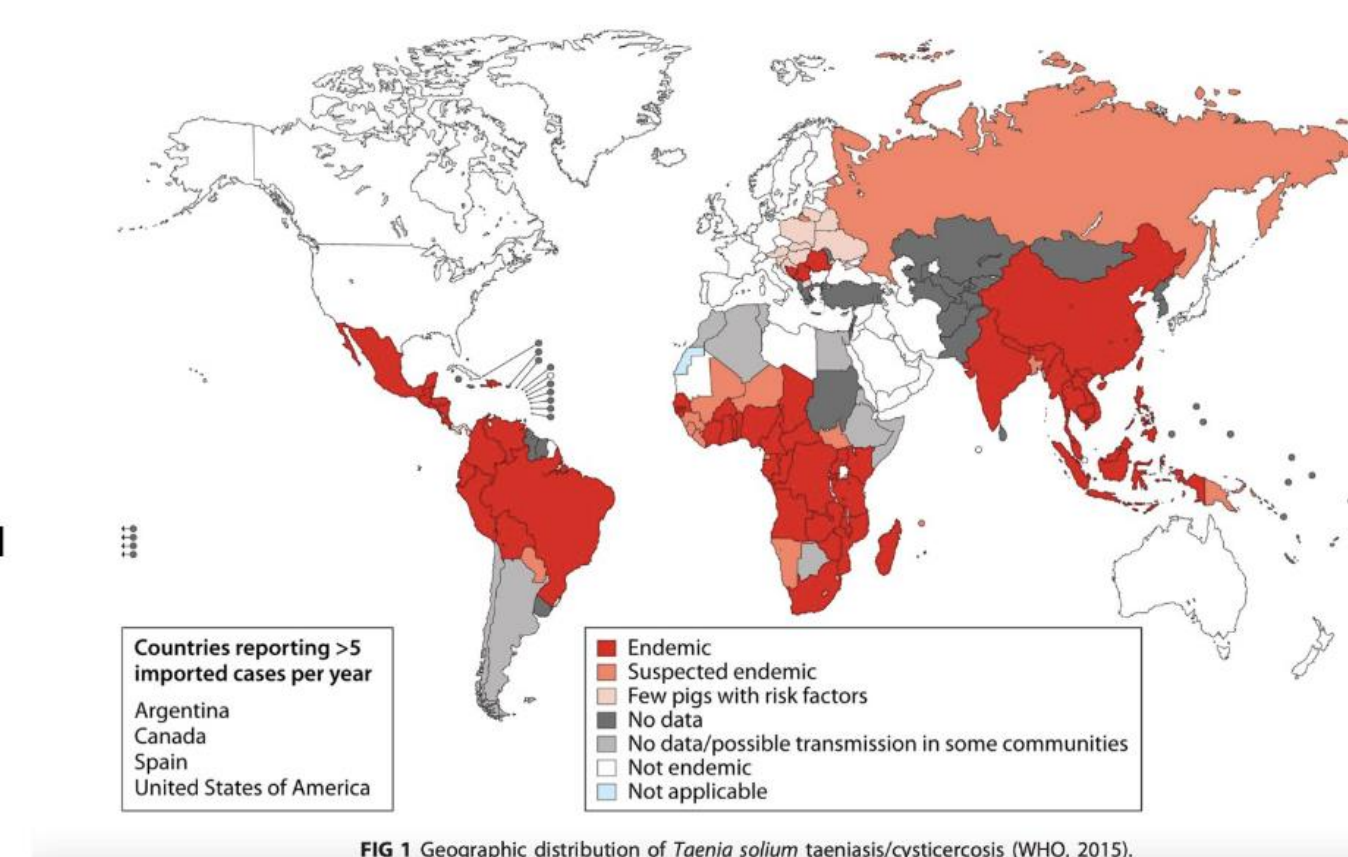


FIG 1. Geographic distribution of *Taenia solium* taeniasis/cysticercosis (WHO, 2015).

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