

Case Report: Neurocysticercosis Presenting as Depression and Homicidal Ideation

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Background

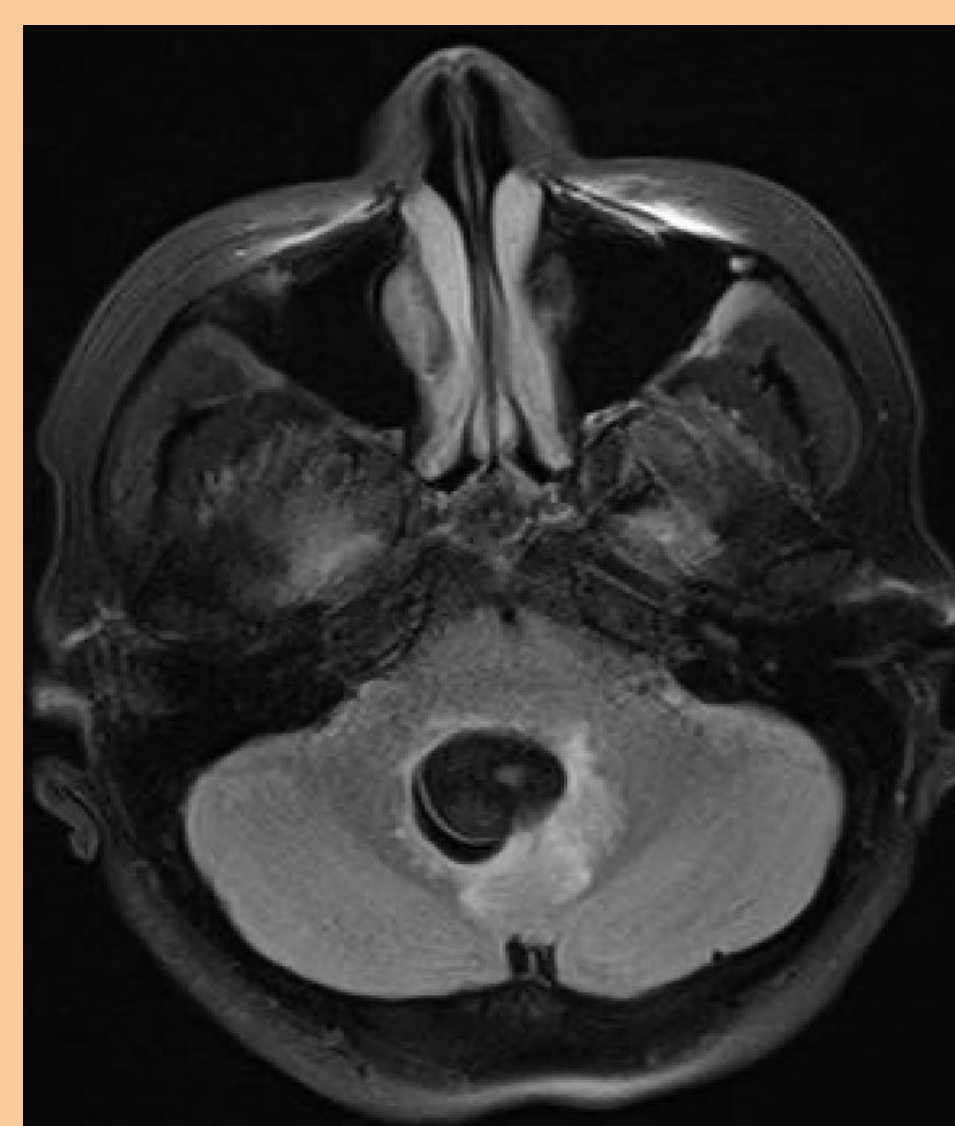
Neurocysticercosis (NCC) is a parasitic infectious disease that occurs when larvae of the tapeworm *Taenia solium* invade neurologic tissue. The majority of patients with NCC present with headaches or seizures, or remain asymptomatic. Rarely, NCC can have psychiatric manifestations such as depression or psychosis. Given that NCC is much more likely to present with neurologic rather than psychiatric symptoms, diagnosis can be challenging when psychiatric symptoms are the only manifestation of active disease.

Case Presentation

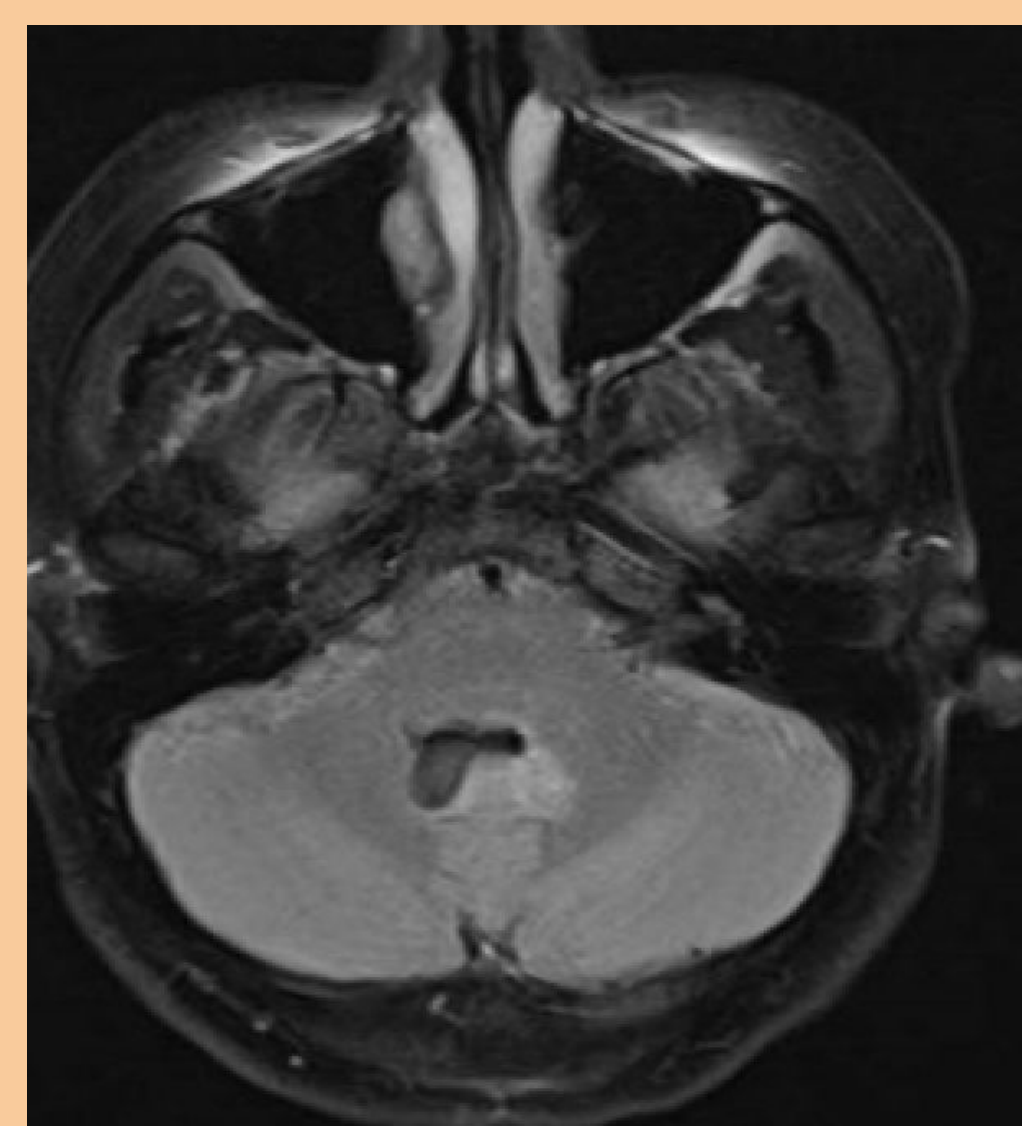
- In 2017, a 29 year-old female from Guatemala developed seizures and headaches. MRI brain revealing several cystic lesions confirmed the diagnosis of NCC. Symptoms remitted with albendazole and dexamethasone treatment.
- From 2020-2022, the patient had 9 psychiatric hospitalizations for depressed mood, suicidal ideation, anxiety with panic attacks, hallucinations, and thoughts to harm her child.
- NCC was considered stable: MRI brain showed slight enlargement of the fourth ventricle cystic lesion (2.5 x 1.7 cm), but neurologic exams were reassuring and the patient was neurologically asymptomatic.
- She was trialed on multiple antidepressant and antipsychotic medications with minimal benefit.

Diagnosis & Intervention

- Psychiatric hospitalization: patient developed tingling sensation in her extremities and blurry vision; physical exam revealed dysmetria and ataxia so urgent head imaging was pursued.
- MRI brain: increased size of fourth ventricle cystic lesion (2.3 x 2.3 cm) with cerebellum and brainstem edema, ventriculomegaly, and cerebellar tonsillar herniation.
- Surgery: suboccipital craniotomy for cyst removal and placement of right occipital ventricular drain with Neurosurgery.
- Post-operative course: the patient was treated with albendazole and dexamethasone and developed delirium with hallucinations.
- Discharge medications: aripiprazole, duloxetine, lamotrigine, albendazole, and dexamethasone.
- Follow up: NCC is in remission, she followed up with Neurosurgery for pseudomeningocele which is stable, and she has not required psychiatric hospitalization since surgery.



Day before transfer to Neurology



Two months post surgery

Discussion

- Psychiatric symptoms of NCC are diverse, underreported, and rarely may be the only manifestation of active NCC.
- The role of head imaging in the evaluation of psychiatric symptoms in patients with NCC is currently unknown.
- Most psychotropic medications appear to be safe in patients with NCC, however efficacy may be limited.
- It is unclear how long to continue psychotropic medications for NCC-related depression and psychosis after surgical intervention.

Conclusions

Psychiatric symptoms may be the only manifestation of active NCC. Future research should attempt to generate guidelines regarding indications for head imaging and psychotropic medication management of NCC. This case highlights the importance of multidisciplinary collaboration and cultural competency.

References

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