

# Hemorrhagic Septic Emboli and Ring Enhancing Lesions Mimicking Neurocysticercosis



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## Purpose

To raise awareness of neurocysticercosis as a possible etiology for a patient presenting with altered mental status and recognition of its various radiographic presentations.

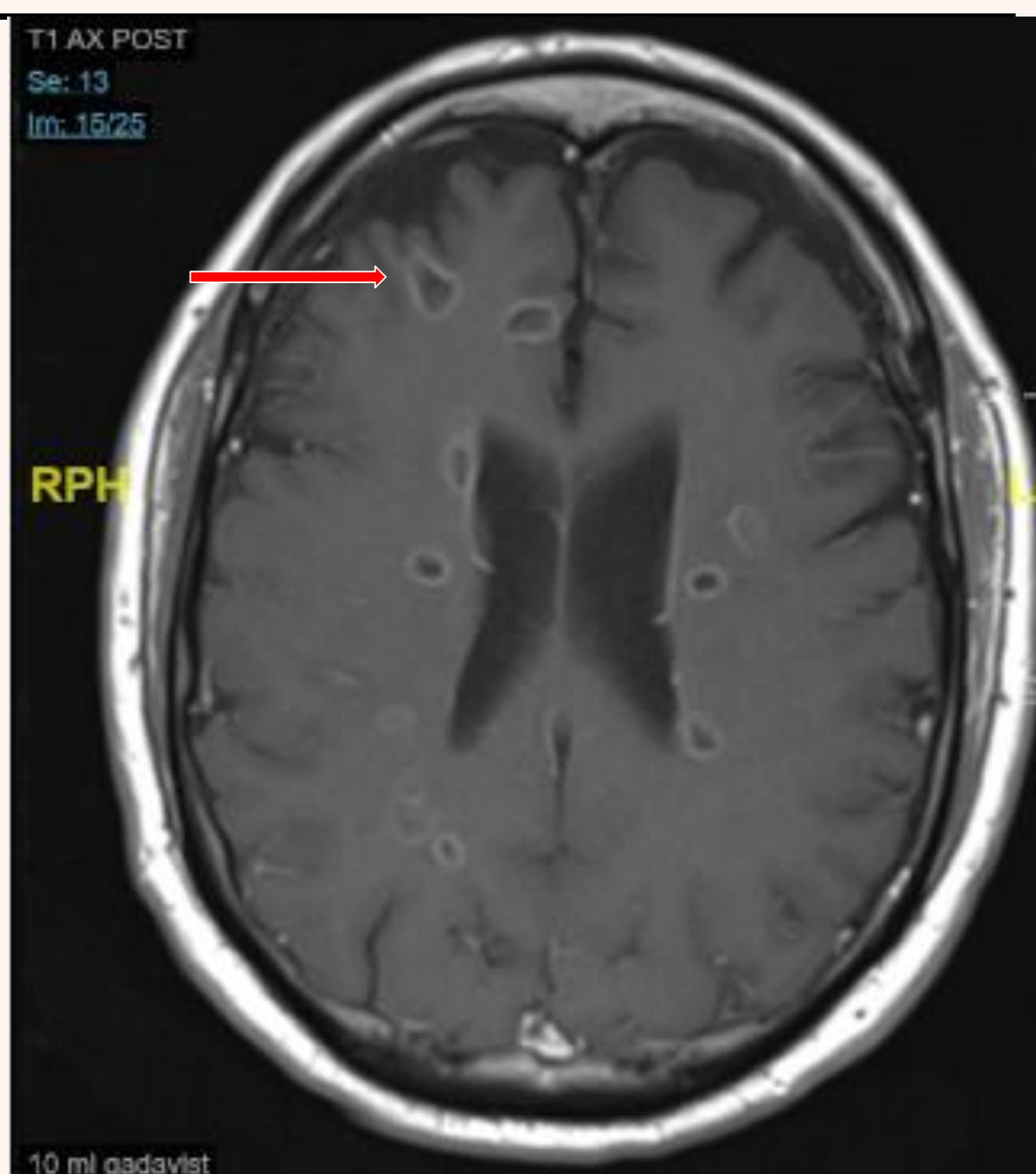


Fig.1-Axial MRI displaying ring enhancing lesions in the frontal and parietal lobes

## Background

- Neurocysticercosis is the most common CNS parasite in the world with an increase in the number of cases in the United States.<sup>2</sup>
- Neurological manifestations can include seizure, cognitive dysfunction, dementia, and visual hallucinations.<sup>2,3</sup>

## Case History and Examination

- 67-year-old male with fatty liver disease presented to Valley hospital as a transfer for neurosurgical evaluation following detection of suspected hemorrhagic septic emboli seen on imaging.
- Patient had been febrile for 10 days, reaching temperatures as high as 104°F.
- Prior to hospitalization, he was treated for a urinary tract infection, but mentation continued to progressively decline.
- On examination, he was found to be somnolent, lethargic and disoriented but was otherwise grossly nonfocal.
- MRI of the brain exhibited ring-enhancing lesions after which the patient was started on empiric antibiotics including antibacterial, antiviral and antifungal agents along with dexamethasone. (Fig. 1,2,3)
- Further infectious and autoimmune serum and CSF work-ups were grossly non-revealing except a neutrophilic pleocytosis and eventual positive IgG immunoassay confirming neurocysticercosis.
- Patient's mentation continued to improve; patient was transferred to a long-term facility in stable condition.

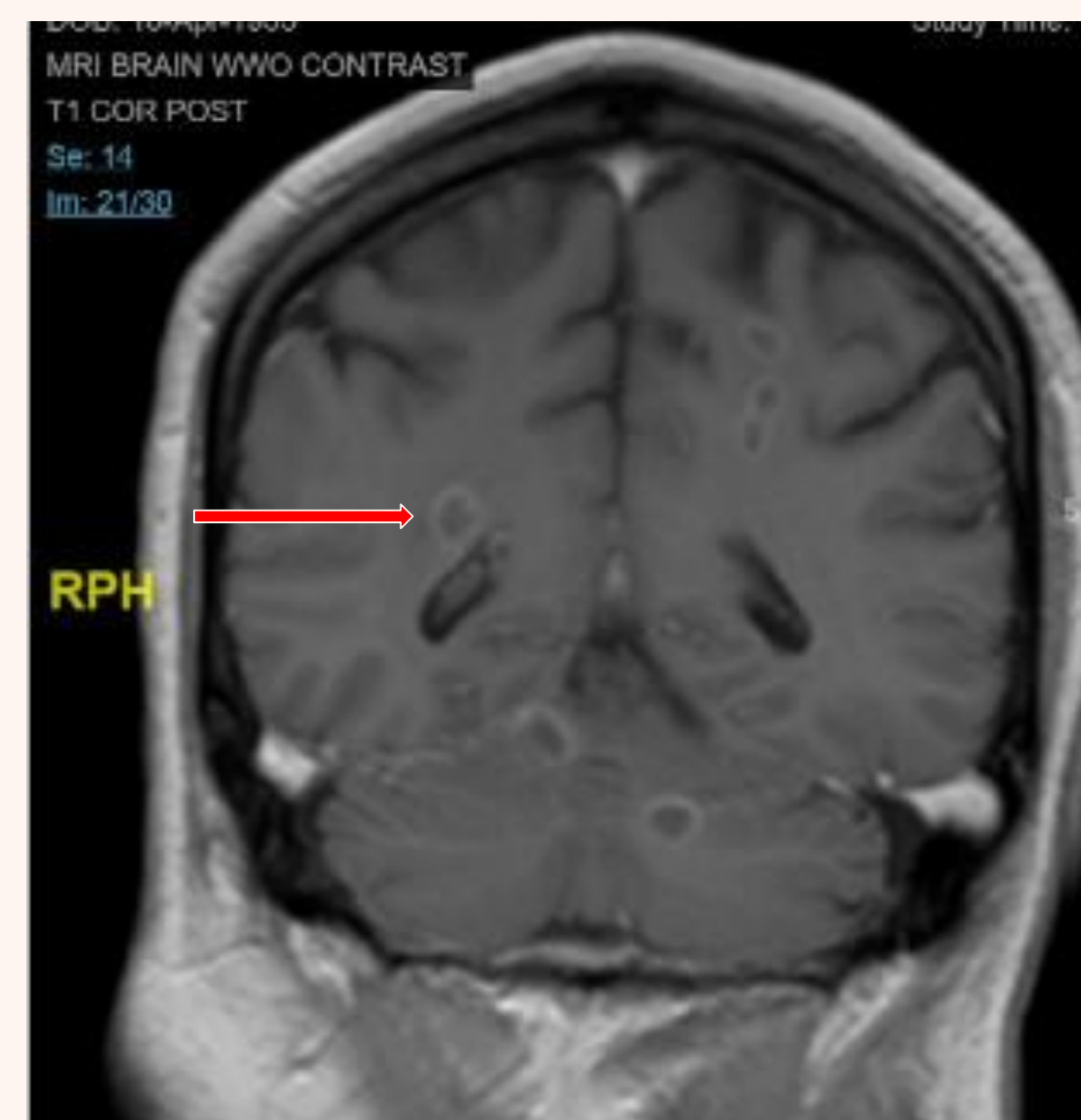


Fig.2-Coronal MRI displaying ring enhancing lesions on the occipital and temporal lobe

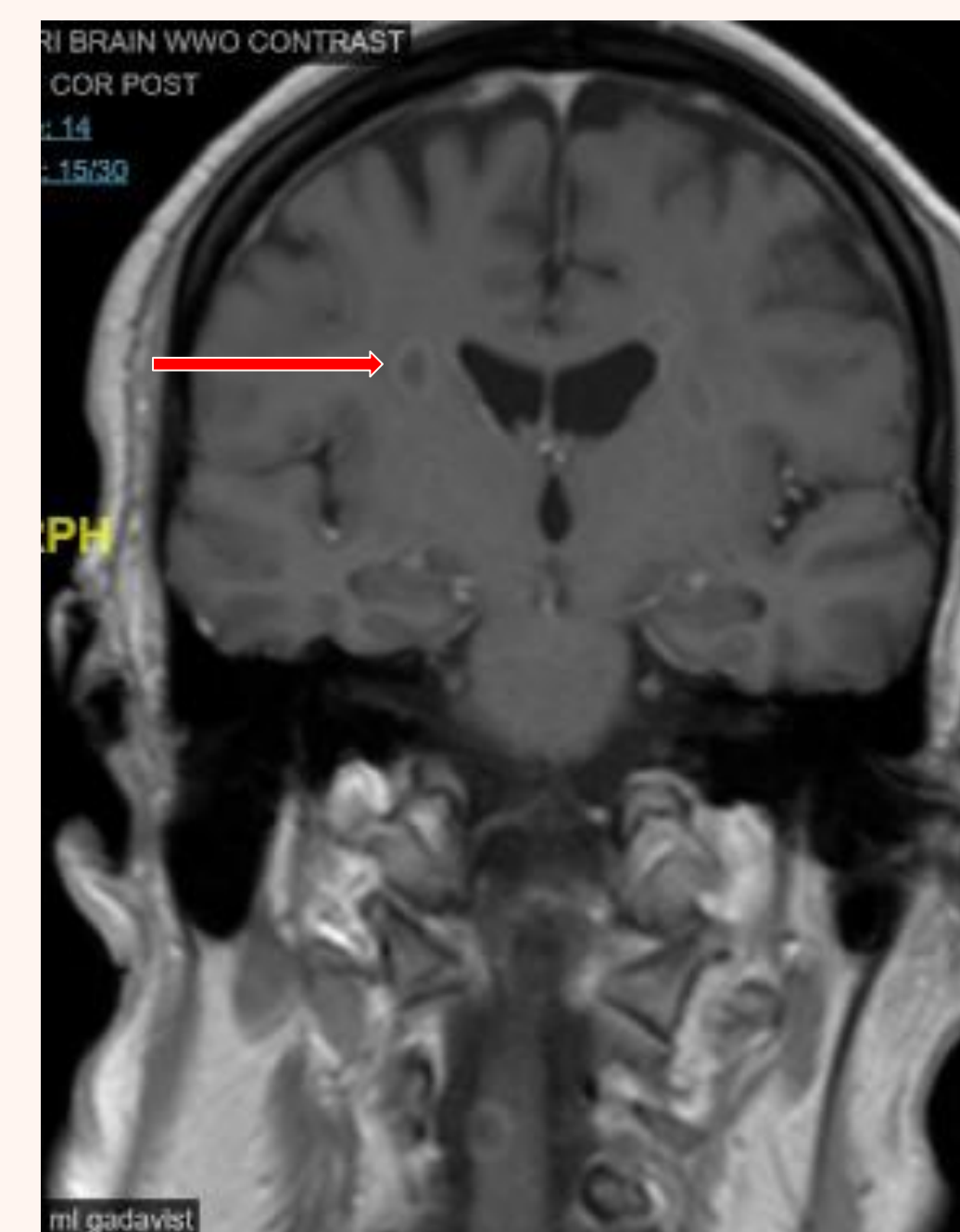


Fig.3-Coronal MRI

## Conclusion

- Radiographic signs include ring enhancing lesions initially that can calcify and sometimes can show a scolex inside the ring.<sup>5</sup> (Fig.1,2,3)
- Risk factors for neurological complications are a lack of treatment, with most complications already evident at the time of hospitalization or developing within a few days.<sup>4</sup>
- For mild to moderate infections, albendazole alongside a corticosteroid are recommended and did result in improvement in our patient's symptoms.<sup>1</sup>
- This case aims to emphasize the importance of understanding the many different etiologies for altered mentation to have rapid diagnosis of possibly life-threatening diseases and to recognize the various radiographic signs of neurocysticercosis.

## References

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