

CEREBRAL TOXOPLASMOSIS MIMICKING MALIGNANCY: A CASE OF INTRACRANIAL SPACE-OCCUPYING LESION DUE TO TOXOPLASMOSIS IN A PATIENT WITH HIV AND HYPOTHYROIDISM



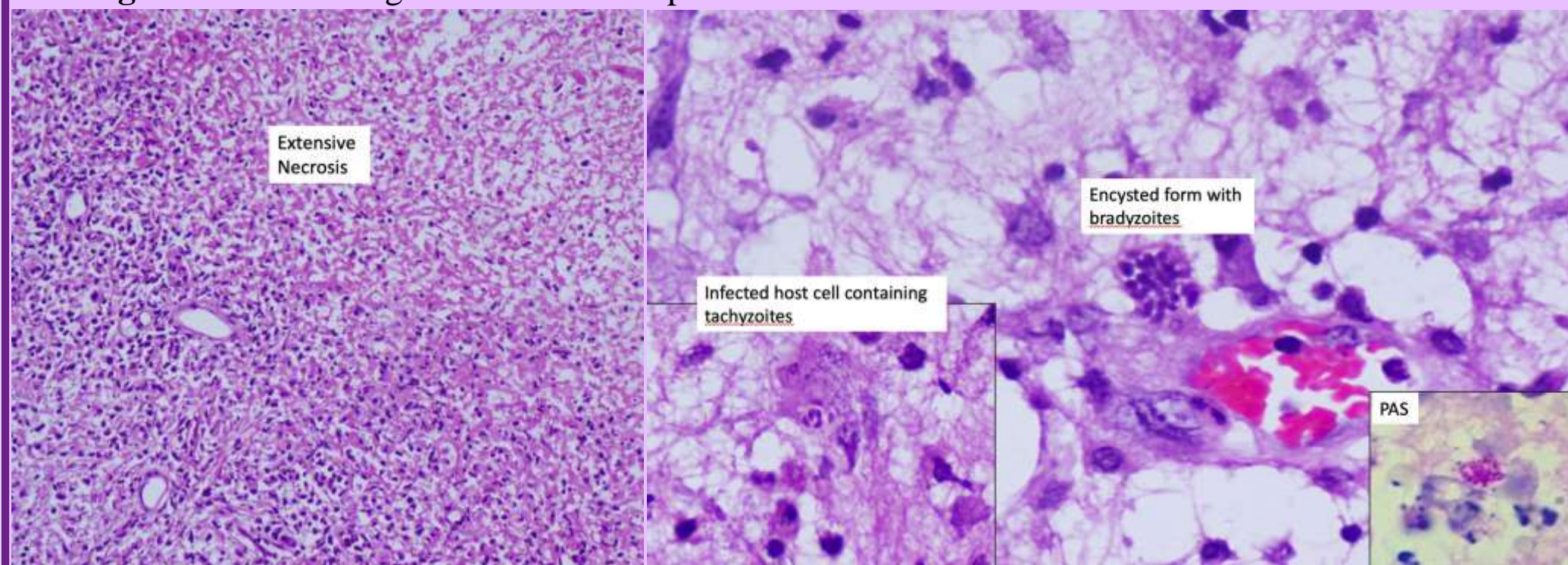
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INTRODUCTION

- Cerebral Toxoplasmosis: CNS infection seen in HIV patients without proper preventive treatment presents as one or more masses within CNS [1]
- In India, the risk of developing cerebral toxoplasmosis in HIV patients is around 43.3%. [2]
- **Common symptoms:** headaches, disorientation, extreme tiredness.
- This case presents cerebral toxoplasmosis mimicking malignancy in a severely immunosuppressed patient, complicated by hypothyroidism and hyponatremia due to SIADH.

CASE REPORT

- 39-year-old female with hypothyroidism
- **Chief complaints:** seizures (1 day), headaches (2 months), and weakness (1.5 months).
- On examination:**
 - MRI: right parieto-occipital ring-enhancing lesions with significant edema.
 - Patient tested positive for Retro Viral Disease.
- Histopathology of biopsy:**
 - **Gross:** Multiple irregular gray-white hemorrhagic tissue fragments.
 - **Microscopy:** Sections show extensive areas of **congestion and necrosis**
 - Aggregates of histiocytes, lymphoplasmacytic and neutrophilic infiltrates, and small-caliber blood vessels with fibrinoid necrosis of the walls and luminal thrombi.
 - It was further evaluated to rule out high-grade glioma and other infectious causes.
 - **Serum Toxoplasma IgG and IgM:** Positive.
 - **Gene Xpert:** Negative, No viral inclusions identified.
 - **AFB:** Negative, **IHC:** IDH1 negative.
 - **P53:** Wild type, **CMV:** Negative.
 - The periphery of necrotic area showed reactive gemistocytic astrocytosis. Within the necrotic foci, **free tachyzoites** (small oval basophilic structures) and **bradyzoites** (encysted forms) were observed.
 - **Diagnosis:** Necrotizing abscess with toxoplasmosis.



MANAGEMENT

Underwent right occipital craniotomy; post-operative recovery was uneventful.

Follow-up:

- 5 days post-surgery: Fever, altered sensorium, drowsiness, irrelevant speech, headache.
- On examination: Hyponatremia due to SIADH.
- EEG: moderate diffuse encephalopathy.
- Treatment: broad-spectrum antibiotics; de-escalated after toxoplasmosis confirmation.
- To manage oral candidiasis: Cotrimoxazole and Fluconazole.
- Symptomatic improvement, discharged with follow-up planned for ART initiation.
- Patient came for follow-up every 2-3 months and reported no health issues.

Discharge Medications:

- Prednisolone (2 days), Pantoprazole (2 weeks), Azithromycin (2 months).
- Levetiracetam, Calcium + Vitamin D3, Thyroxine sodium, Tenofovir/Lamivudine/Dolutegravir, Cotrimoxazole (lifetime).

DISCUSSION

- Highlights complexities in diagnosing and managing cerebral toxoplasmosis in an immunocompromised patient.
- **Diagnosis:** imaging, serology, and biopsy to detect *Toxoplasma gondii*.
- Lesion resembled malignancy at low power but confirmed *Toxoplasma gondii* by high magnification.
- Management included addressing SIADH, requiring careful electrolyte control.
- Successful outcome due to timely Cotrimoxazole, ART initiation, and comprehensive care.

CONCLUSION

- Cerebral toxoplasmosis in immunocompromised patients can mimic malignancy, complicating diagnosis.
- Histopathology of biopsy was crucial for diagnosis and effective management involved addressing complications such as hyponatremia due to SIADH.
- Regular follow-ups and adherence to prescribed medication regimen ensured patient's long-term recovery and helped manage underlying conditions (HIV and hypothyroidism) effectively.

REFERENCES

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