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KARNATAKA RADIOLOGY EDUCATION PROGRAM

A CASE STUDY OF "CYTOTOXIC LESION OF THE CORPUS CALLOSUM"

COMPILED BY
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Objectives

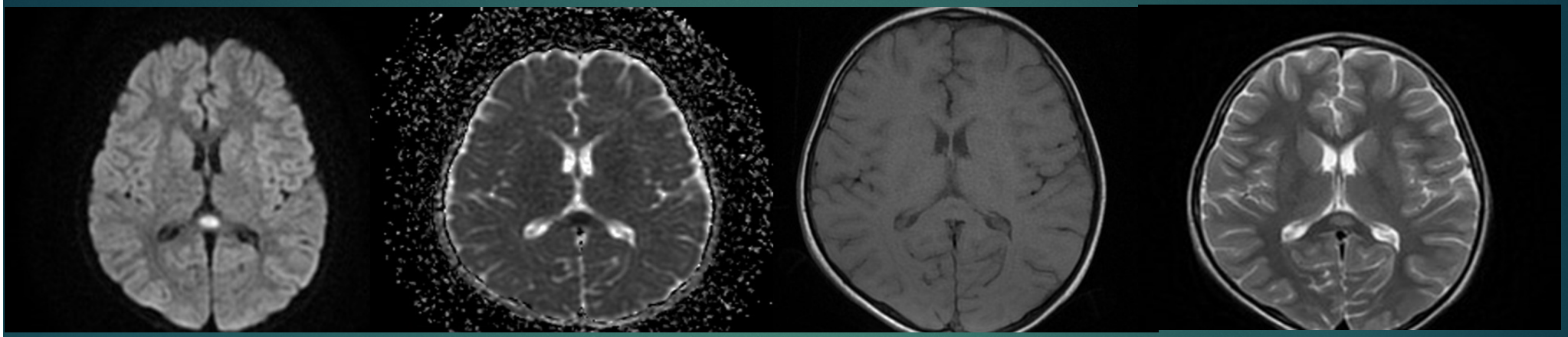
- Cytotoxic lesions of the corpus callosum (CLOCCs) are secondary lesions associated with various entities.
- It is important to recognize these lesions for what they are —secondary lesions.
- It is also important to be familiar with their known causes so that the source can be found and addressed and so that a misdiagnosis of ischemia can be avoided.

Background / summary

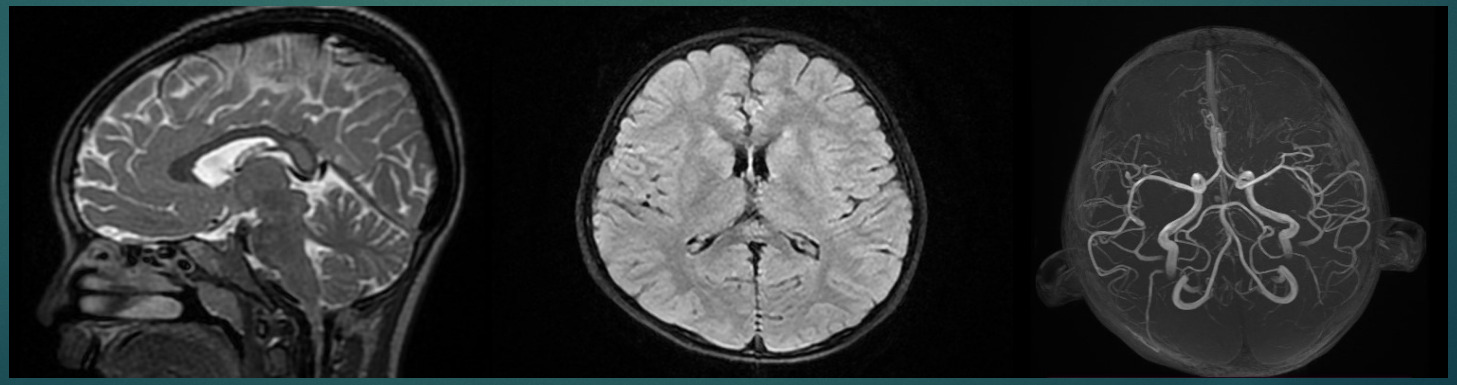
- A 9-year-old male patient known case of epilepsy came with a history of one episode of seizure on sudden stoppage of antiepileptic drugs.

- Following which MRI brain was done.
  - On MRI there was well-circumscribed, small, oval lesions in the midline within the substance of the splenium.
  - T1 iso-hypointense, T2/ FLAIR hyperintense focus with diffusion restriction noted in the splenium of corpus callosum.
  - Normal flow voids are seen in the intracranial vessels

On DWI lesion(**Cytotoxic Lesion Of The Corpus Callosum**) shows diffusion restriction with low ADC values. Lesion appears iso-hypo intense on T1 WI and hyperintense on T2 / FLAIR.



DWI ADC T1 WI T2 WI



T2 WI T2 FLAIR ANGI

Discussion:

- Cytotoxic lesions of the corpus callosum (CLOCCs) are associated with many entities. It is important to recognize these lesions for what they are—secondary lesions.
- Cytotoxic lesions of the corpus callosum are associated with drug therapy. Cytotoxic lesions of the corpus callosum often develop after withdrawal of therapy with antiseizure drugs.
- Drug-associated cytotoxic lesions of the corpus callosum were initially described in patients with seizures , and a number of cytokine abnormalities have been reported in patients with seizures.
- Cytotoxic lesions of the corpus callosum demonstrate reduced diffusion from cytotoxic edema.

Conclusion

- Cytotoxic lesions of the corpus callosum are frequently but not invariably reversible.
- When they are present, their underlying cause should be sought and addressed .
- So that a misdiagnosis of ischemia can be avoided.

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