Boomerang Sign

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A 16 year old male patient presented with fever and altered mental status. He had one episode of generalised tonic-clonic seizure after admission. Meningeal signs were absent and there was no focal neurological deficit. Patient had thrombocytopenia and peripheral blood film revealed gametocytes of Plasmodium falciparum. MRI brain showed the boomerang sign - as a hyperintense lesion in the splenium of corpus callosum in T2W FLAIR and DWI images (Fig. 1a and 1b).

Patient was given intravenous artemesunate with doxycycline. He became afebrile and conscious after 4 days and his platelet counts became normal.

Infarcts of the corpus callosum are rare since the region receives perfusion from three arterial systems namely the anterior cerebral, anterior communicating and posterior cerebral arteries. The splenium is supplied by the posterior pericallosal artery, a branch of the posterior cerebral artery.¹ Infarcts of the splenium are mostly seen in global hypoxic ischemic injury. Other causes include local vascular involvement such as in cerebral malaria, viral encephalitis, cerebral venous thrombosis.² Midline splenium

Restricted diffusion likely represents Wallerian degeneration of interhemispheric neurons rather than ischemic damage to the white matter or axons of the callosum.

Most common clinical presentation is altered mental status.

References
