

## Letters to the editor

### OVERVIEW

Please submit letters for the editor's consideration within three weeks of receipt of *Clinical Medicine*. Letters should ideally be limited to 350 words, and sent by email to: [clinicalmedicine@rcplondon.ac.uk](mailto:clinicalmedicine@rcplondon.ac.uk)

### Post-malaria neurological syndromes

Editor – O'Brien and Jagathesan gave a succinct review of neurological sequelae following treated malaria infection, illustrated by a case of acute encephalomyelitis in a commercial airline pilot who contracted *Plasmodium falciparum* malaria in West Africa.<sup>1</sup>

The reported case also illustrates the continuing practice in some UK centres of using quinine to treat severe malaria because of a lack of awareness of the evidence that the treatment of choice is parenteral artesunate. Use of artesunate has been associated with a 34% mortality reduction compared with parenteral quinine in adults with severe malaria and a corresponding 22% mortality reduction in African children.<sup>2,3</sup> The patient presented in this report was treated with intravenous quinine and an exchange transfusion for the initial management of his severe malaria. Prompt administration of artesunate results in a rapid fall in peripheral parasitaemia and would have obviated the need for exchange transfusion, a procedure of unproven benefit in the management of severe malaria.<sup>4</sup> Of note for this case report, despite conferring a survival advantage, artesunate treatment of severe malaria has not been associated with a reduction in neurological sequelae compared with quinine.

Most practitioners would agree it is important to ensure treatment guidelines are based on the best available evidence, including for conditions that are seldom encountered. The World Health Organization has recommended artesunate for the treatment of all patients with severe malaria since 2006.<sup>5</sup> The same recommendation was included in the UK malaria treatment guidelines in 2016, although larger centres that encounter malaria more frequently have been using it for some time.<sup>6</sup> Earlier difficulties with the procurement of parenteral artesunate have been overcome, meaning that all UK trusts can now update their formularies to ensure artesunate is available as a life-saving treatment for all patients presenting with severe malaria. ■

### Conflicts of interest

The author has no conflicts of interest to declare.

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### References

- 1 O'Brien MD, Jagathesan T. Lesson of the month 1: Post-malaria neurological syndromes. *Clin Med* 2016;16:292–3.

- 2 Dondorp A, Nosten F, Stepniewska K *et al.* Artesunate versus quinine for treatment of severe falciparum malaria: a randomised trial. *Lancet* 2005;366:717–25.
- 3 Dondorp AM, Fanello CI, Hendriksen IC *et al.* Artesunate versus quinine in the treatment of severe falciparum malaria in African children (AQUAMAT): an open-label, randomised trial. *Lancet* 2010;376:1647–57.
- 4 Tan KR, Wiegand RE, Arguin PM. Exchange transfusion for severe malaria: evidence base and literature review. *Clin Infect Dis* 2013;57:923–8.
- 5 World Health Organization. *Guidelines for the treatment of malaria*, 3rd edn. Geneva: WHO, 2015.
- 6 Lalloo DG, Shingadia D, Bell DJ *et al.* UK malaria treatment guidelines 2016. *J Infect* 2016;72:635–49.

### Stroke mimic diagnoses presenting to a hyperacute stroke unit

Editor – The study that showed that access to magnetic resonance imaging (MRI) facilitated the diagnosis and management of stroke mimics<sup>1</sup> strikes a parallel with another study evaluating MRI after a negative computerised tomography (CT) scan.<sup>2</sup> In that study, as many as 11.5% of patients who had a non-diagnostic CT scan after presenting with atypical stroke symptoms were subsequently shown to have subacute infarcts when MRI was performed within 24 hours of the negative CT scan.<sup>2</sup> These observations are strong arguments for an MRI-first policy along the lines demonstrated in a recently reported 'real world' study.<sup>3</sup> In that study, among 314 patients with suspected stroke who were screened solely by MRI, 73 proceeded to intravenous thrombolysis. Thanks to a concurrent quality improvement (QI) strategy, door-to-needle time (DNT) significantly improved during the three phases of implementation of the MRI-first policy such that median DNT amounted to 83 minutes, 68 minutes and 54 minutes in phases I, II and III, respectively ( $p < 0.001$ ). Exceptions to MRI-first included contraindications to MRI (one patient) and poor general condition (two patients).

The QI process included pre-notification by the emergency medical service, limiting the MRI sequence and introduction of a rapid examination tool.<sup>3</sup> The disadvantage of MRI being more time consuming than CT scanning can be mitigated by applying novel strategies to reduce the time taken by high computation processes, such as diffusion-weighted imaging. High angular resolution diffusion imaging is one such strategy. In theory, this strategy is capable of reducing computation time by about 50% without any reduction in result quality.<sup>4</sup> ■

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The author has no conflicts of interest to declare.

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