We declare no competing interests.

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Authors’ reply

We thank Yi Shiau Ng and colleagues for their insightful comments about our Review.1 We agree that mitochondrial disease should be considered in the differential diagnosis of some cases of possible posterior reversible encephalopathy syndrome (PRES) and that it is imperative to correlate clinical history with radiographic findings. As they point out, mitochondrial disorders are rare, but clinical features that might point towards their diagnosis include bilateral hearing loss, axonal polyneuropathy, and positive family history (all absent in PRES).

In the right context, genetic testing should be done to avoid missing this important, albeit uncommon, alternative diagnosis.

We respectfully disagree with Daniele Grioni and colleagues, who suggest that PRES might be an epileptic disorder. Although seizures are a common clinical presentation of PRES, about 25–40% of adult patients with PRES do not have seizures. Seizures are just one of the various ways in which the brain oedema—precipitated by endothelial dysfunction, the key pathophysiological disturbance—can manifest. Studies that have assessed EEG findings in PRES are encumbered by selection bias of the patients undergoing EEG and, even in these studies, generalised slowing and inter-ictal discharges—not focal seizures or status epilepticus—are the most common findings.2,3 Like Grioni and colleagues, we have also found that the bulk of epileptiform discharges in PRES are found in the posterior brain regions but, in our experience, paroxysmal lateralised epileptiform discharge-like activity does not require treatment with antiepileptic drugs and the clinical symptoms and brain MRI abnormalities do not always correlate with the location of the epileptiform activity.

Piergiorgio Lochner and colleagues describe two patients with PRES who had raised opening CSF pressure during lumbar puncture and increased optic nerve sheath diameter as assessed by ultrasonography. We agree that additional research using optic nerve sheath diameter measurements to non-invasively estimate intracranial pressure is needed. Intracranial hypertension requiring monitoring and treatment is uncommon in patients with PRES; hence, this technology might be more useful in other acute neurological disorders. When performed by a single skilled sonographer, ultrasonography seems to be an accurate method of detecting raised intracranial pressure4 but, in other real world experiences, inter-rater reliability is suboptimum. Additionally, the range of proposed threshold values has varied substantially,5–6 probably as a result of the small dimension of the optic nerve sheath, variations in sonographic technique, and differences in operator experience. For now this technique remains investigational as we await results from prospective multicentre studies.

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Counterfeit antiepileptic drugs threaten community services in Guinea-Bissau and Nigeria

Falsified drugs are a serious, yet vastly underreported, health-care hazard.1 Despite stringent regulations, counterfeit medications are becoming an increasing threat in low-income and lower-middle-income countries. Production of falsified drugs remains financially rewarding and largely risk-free because of inadequate law enforcement.1 We want to bring to the attention of the neurological community that promising efforts to
Address the huge epilepsy treatment gap in rural sub-Saharan Africa are being undermined by counterfeit antiepileptic drugs (AEDs).

In lower-middle-income countries, more than 60% of people with epilepsy do not have access to AEDs or are inadequately treated.1 Community-based epilepsy care programmes improve access to epilepsy treatment in these settings.2 WHO specifically advocates the use of antiepileptic drugs (AEDs) or are inadequately treated.2 Epilepsy treatment in these settings.3 Community-based rehabilitation services improve access to AEDs or are inadequately treated.2

has been unable to track either the manufacturers or the distribution sources for both new brands as their contact details were misleading or not specific enough, suggesting—together with the chemical analysis results—that the drug was falsified. The community-based rehabilitation services immediately banned the use of the falsified phenobarbital and reported the problem to non-governmental health-care organisations and WHO.

Counterfeit AEDs had not been previously reported, nor are they a category in the Medicines Quality Database. Falsification of drugs is a serious crime, potentially even more damaging than the falsification of non-medical products.1 Counterfeit AEDs are detrimental because, first, withdrawal symptoms can be severe; second, sudden absence of efficacy could lead to a loss of confidence in the health-care system and might reduce access to treatment; and third, sudden loss of seizure control and consequent unexpected recurrence of seizures can be life-threatening. Community-based epilepsy services that rely on local personnel, resources, and procurement of AEDs are essential for these community-based epilepsy services. We believe that this counterfeit drug problem is very likely to affect other lower-middle-income countries that rely on community-based services for drug supply. Inexpensive generic drugs targeting epilepsy are therefore prone to falsification, and AEDs should be included in the Medicines Quality Database. Enhanced monitoring of AEDs quality is essential. In the setting of community-based rehabilitation services in Africa, we advise that, if a change of the frequency of seizures occurs, a key first step must be to investigate the quality of the AEDs administered.

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