Meanwhile, perhaps the main value of ISABEL is its potential to ameliorate cognitive tendencies to 'premature closure' and 'diagnostic momentum' and to improve diagnostic accuracy in complex cases that are difficult to unravel.

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Postgraduate training in global health: ensuring UK doctors can contribute to health in resource-poor countries

Editor – It was encouraging to see the emphasis on medicine in resource-poor settings in the paper by Brown and colleagues (*Clin Med* October 2011 pp 456–60). The need is certainly great as highlighted by a recent review in the *Lancet* indicating that very few developing countries are likely to reach Millennium Development Goals 4 and 5.[1] Many of the difficulties are due to a lack of trained personnel, as well as a lack of resources.

It was especially interesting to see the emphasis being placed on the role of more junior doctors by Brown *et al.* Having completed my foundation years in Wales, I spent a year volunteering in Sierra Leone, West Africa, in a clinic for children aged 12 and under, in a heavily supervised post. I am now undertaking the DTM&H and hoping to apply into further training starting in August 2012. However, in the current system it is quite likely that taking this time out to focus on improving healthcare in the developing world may count against me on some of the more rigid application forms.

I know from experience in West Africa that doctors who have completed the foundation years are able to contribute significantly in terms of providing training for nurses and treating some of the more basic cases, as well as carrying out audits to ensure that good practice is being maintained. Doctors at this level also often have fewer family commitments so are more able to travel to these settings than some who are more senior. Unfortunately, many young doctors are afraid of doing this as there are fears it will disadvantage them in certain specialties. In contrast, this experience has greatly enhanced my clinical skills and given me a new clinical confidence, especially relating to teaching. Hopefully, articles such as the one mentioned above will lead to a more positive view of time out to work in developing settings and more opportunities to bring these new found skills back into the NHS.

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Paraneoplastic limbic encephalitis associated with ovarian teratoma

Editor – I read with great interest the article by Derry and colleagues (*Clin Med* October 2011 pp 476–8) on autoimmune limbic encephalitis. I would like to highlight an important form of paraneoplastic limbic encephalitis (PLE) which associated with ovarian teratoma.

While PLE has shown preponderance for females in their 60s and above, with small cell lung carcinoma being the most commonly-associated malignancy,[1] a relatively new category of PLE associated with ovarian teratoma has been described recently, which was found in young female adults. In a case series, the mean age of reported cases was 25±8 years. They presented with prominent psychiatric symptoms and behavioral disturbances, focal or generalised seizures, refractory involuntary movements and autonomic instability. Central hypoventilation requiring prolonged ventilator support has also been reported in patients with brainstem involvement. Neuroimaging finding is characterised by temporal lobe or brainstem abnormality. Lumbar puncture in patients with PLE typically showed cerebrospinal fluid with lymphocytic pleocytosis.[2]

Accurate and early diagnosis of PLE can be difficult, as symptoms may precede the tumour diagnosis in up to 60% of patients by a median of three months,[3] and the clinical presentation often mimics various forms of infectious and autoimmune disorders. More recently, antoantibody to N-methyl-D-aspartate receptor (NMDAR) of cell membrane antigens found in hippocampus and forebrain has been identified to have resulted in psychocognitive impairment. Presence of anti-NMDAR antibodies in the serum of patients with PLE is strongly associated with an ovarian teratoma, and is concentrated in the nervous tissue of the tumour. Malignancy eradication and immunosuppressive treatment has been shown to reduce morbidity and mortality. The time interval of clinical improvement, however, has been reported diversely from one to four months.[2]

In summary, PLE can be the first manifestation of ovarian teratoma and should be considered in young females who present with neuropsychiatric symptoms. Early diagnosis with aggressive treatment should be initiated to optimise clinical outcome.

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Autoimmune limbic encephalitis

Editor – We read with interest the recent article by Derry *et al* (*Clin Med* October 2011 pp 479–82) concerning limbic encephalitis (LE). There are important additional issues leading on from this succinct article that may be useful to the general physician when considering a LE diagnosis.

As reflected in the article, the diagnosis of autoimmune encephalitis (AE) and, more specifically, LE is a difficult one with no causative agent identified in up to two-thirds of encephalitic patients referred to specialist centres.[1]

As mentioned in the article, recent work has indicated potassium channels are not the antigenic target in LE and it is in fact Anti-LGI1 (Leucine-rich glioma inactivate 1).[2,3] In addition, other studies suggest that another auto-antigen 'CASPR2 - contactin-associated protein-like 2' (expressed in hippocampal neurons) is associated with illnesses previously attributed to anti-VGKC antibodies such as drug-refractory epilepsy, encephalitis, peripheral nerve dysfunction, or a combination of both: Morvan syndrome or neuromyotonia.[4–7] Therefore, the term 'anti-VGKC' encephalitis is no longer in routine use.

The authors rightly illustrate the cardinal symptoms of LE as being severe short-term memory impairment with psychiatric symptoms such as personality change, depression, anxiety, hallucinations, confusion, and complex partial (often temporal) and generalised seizures.[8,9] It must be recalled that auto-antibodies may take some weeks to process and often LE treatment will have to be initiated prior to definitive diagnosis. With this in mind, there are other clinical features that may assist in pointing the clinician towards the diagnosis of LE. Features classically associated with anti-LGI1 encephalitis include faciobrachial tonic seizures[7] and, in 40% of patients, myoclonus.[2] With regards to initial blood tests, hyponatraemia is a common finding in patients with anti-LGI1 encephalitis being found in patients both with and without underlying malignancy, indicating that it is not purely a paraneoplastic phenomenon.[10] Autonomic instability is also described.

Once LE has been identified, it is essential to exclude paraneoplastic aetiology such as anti-Hu or anti-Ma2 associated LE as tumour treatment and, if possible, removal is associated with better outcomes than immunomodulatory therapy alone.[3] It is important to note that the encephalitic presentation will precede the identification of the neoplasm in up to three quarters of patients.[9,11,12]

Thankfully, as the article points out, non-paraneoplastic LE is associated with good outcomes if recognised early and treated aggressively. However, the clinician must be alert to the fact that residual neurological deficits may be subtle, difficult to elicit and, in some cases, sufficient to preclude the patient's return to work.

It is clear that the earlier AE or LE is diagnosed and therapy started, the better the outcome. We recently published an AE review containing a clinical algorithm for work-up, diagnosis, and treatment of autoimmune encephalitis[13] that – in conjunction with important articles such as Derry *et al*'s – we hope will assist the neurologist and generalist alike in early AE diagnosis and treatment.

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The changing landscape of anticoagulation and atrial fibrillation

Editor – We read with great interest the article by Breen and Hunt which presented an overview of the new oral anticoagulants (*Clin Med* October 2011 pp 497–9). We wish to highlight three new studies published since their review was