

depending on their state of study and the state to which they are applying, it seems that in the future these students may miss out in favour of Commonwealth-supported students covered by the health ministers' guarantee.

Elkin and Studdert concluded that Australian courts would be unlikely to find that international students hold a legitimate expectation of internship. It is less certain whether this conclusion might apply to state-funded students or Australian permanent residents and citizens at private universities. At a minimum, these applicants too deserve "full and frank information" about their internship prospects.

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## Alarm about computed tomography scans is unjustified

**Richard M Mendelson, Richard A Fox and Nicholas H de Klerk**

**TO THE EDITOR:** Blecher correctly asserts that alarm is not the appropriate reaction to the potential dangers of computed tomography (CT) scans.<sup>1</sup> Such alarm risks discouraging patients from having the CT scans they need. Appropriate CT scans are good; inappropriate ones are bad.

Blecher is also correct in stating that the linear, no-threshold (no dose is entirely safe however small) model of radiation risk is theoretical.<sup>2</sup> However, the advice of all international regulatory radiation protection authorities is to assume that the model is correct. To do so is prudent, even if overly conservative. And while these authorities hold this position, it would be professionally

irresponsible to ignore it. Notwithstanding the Health Physics Society statement that the risk of ionising radiation below 100 mSv is negligible,<sup>3</sup> the risk is thought to be cumulative. Furthermore, a single CT scan of the chest, abdomen and pelvis may expose a patient to 30 mSv or more, and the risk in children and young adults is considered to be 2–3 times greater than the average.<sup>4</sup>

The atomic bomb data are based on radiation dose levels as low as 5 mSv,<sup>5</sup> with the cohort exposed to doses between 5 and 20 mSv showing an 85% chance that the risk is worse than we think and a 15% chance that it is better than we think. Although not statistically significant at the 95% confidence level, these figures indicate that great care is needed.

The dimensions of the risks of low-dose radiation are contentious, but are we willing to ignore the danger of accepting Blecher's argument?

It is a Pascal's wager. Providing we do not spook patients from having necessary scans (and this requires better communication with patients), our possibly over-cautious approach should result in more appropriate use of diagnostic imaging. The benefits go beyond those of limiting unnecessary radiation.

Blecher finds it ironic that concerns about the dangers of CT are rising as radiation doses are falling. Doses may be falling, although that depends on where the baseline is drawn. When multidetector CT scanning was introduced, doses rose,<sup>6</sup> but if, since then, doses have been falling, there is nothing ironic about this. Doses are falling because of the concern.

Whether a patient undergoes an imaging procedure should be subject to the process of justification mandated in the Australian Radiation Protection and Nuclear Safety Agency code of practice.<sup>7</sup> If the potential benefit outweighs the risk, the procedure is justified and the examination should proceed, but optimised to ensure that the lowest possible dose of radiation is used to provide diagnostic images — the ALARA principle (As Low As Reasonably Achievable).

In summary:

- If a CT scan is clinically justified, then it should be performed and we should certainly avoid alarming our patients.
- If a scan is not justified, it should not be performed.
- We should adhere to the ALARA principle.
- Whenever appropriate, a non-ionising alternative to CT scans should be consid-

ered, particularly for children and young patients.

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## Seizures related to praziquantel therapy in neurocysticercosis

**Saliya S Hewagama, Jonathan D Darby, Harsha Sheorey and John R Daffy**

**TO THE EDITOR:** Seizures can be precipitated by treatment with praziquantel in patients with underlying neurocysticercosis, but this is rare and has not previously been described in Australia. We describe the case of a patient who developed seizures after antischistosomal therapy.

An asymptomatic 23-year-old Burmese man underwent migrant health screening by his local doctor a month after arriving in Australia. His schistosomal serological results were positive (titre, 1:32) and he received three doses of 600 mg praziquantel. Three days later, he experienced several generalised tonic-clonic seizures in short succession, each lasting a few minutes. A

magnetic resonance imaging (MRI) scan revealed three ring-enhancing lesions less than 1 cm in diameter, suggestive of neurocysticercosis. He was treated with phenytoin and also received dexamethasone for 1 month. A repeat MRI scan 6 months later showed significant reduction in the size of the lesions, to less than 3 mm. Phenytoin therapy was ceased after 3 months, with no seizures at last review (6 months). In view of the temporal association between the treatment and the seizures in this previously asymptomatic patient, we believe the seizures were precipitated by the praziquantel therapy.

Cysticercosis, which is endemic across the developing world, is caused by the helminth *Taenia solium*. Clinical disease, including neurocysticercosis, is often asymptomatic. Symptomatic neurocysticercosis often presents as seizures, especially as the cysts degenerate, and is the commonest cause of acquired, late-onset epilepsy in the developing world.<sup>1</sup> The benefit of treatment remains controversial, especially when there are only a few cysts.<sup>1-3</sup> Praziquantel and albendazole therapy accelerate cyst degeneration, and subsequent inflammation may precipitate seizures, which are sometimes pre-emptively managed with corticosteroids.<sup>1</sup> There is conflicting evidence on the benefit of treatment for long-term seizure frequency.<sup>2,3</sup>

Although screening for some parasitic infections in refugees in Australia is recommended,<sup>4</sup> this does not include cysticercosis. Serological tests for *T. solium* cannot differentiate between active and past infections, have limited sensitivity, are not widely available in Australia, and cannot differentiate between neurocysticercosis and cysticercal disease elsewhere.<sup>5</sup> The only reliable method for diagnosis is neuroimaging, which is impractical for mass screening.

Nevertheless, we advocate a high degree of suspicion for neurocysticercosis in migrants from *Taenia*-endemic areas. Geographical origin alone is insensitive for identifying an at-risk population. A history of seizures, or the presence of subcutaneous nodules, should prompt investigation with serological testing and subsequent neuroimaging before consideration of treatment. In such symptomatic patients, this will allow the need for anthelmintic therapy to be assessed, along with consideration of adjunctive corticosteroid therapy.

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## What is the place of a student medical journal?

**Matt D Schiller**

**TO THE EDITOR:** "Student medical journals" are a very broad church, encompassing everything from pseudo-magazines to rigorously peer-reviewed publications. In April this year, a national journal of the latter variety was launched here in Australia: the *Australian Medical Student Journal (AMSJ)*.<sup>1</sup>

The AMSJ accepts research, review and opinion articles from students of medicine or health sciences at Australian universities. The journal's volunteer staff comprises only medical students, and peer-review is by academics associated with Australian medical schools, or clinicians at Australian teaching hospitals. The inaugural issue could hardly have been more national in its focus, with students from 14 Australian medical schools, covering every

state, being represented among the authors. The issue was recently distributed free of charge to thousands of medical students around Australia in both print and electronic formats. After the success of the inaugural issue, we plan to begin biannual production from 2011, continuing in both formats. The AMSJ operates as a not-for-profit student organisation, and printing and other costs are provided for by sponsors, including the Australian Medical Association, Australian General Practice Training, and the Royal Australasian College of Physicians.

While it is unique in a number of facets, the AMSJ is not the first publication of its kind. The Australian Medical Students' Association magazine *Panacea* began life in 1968 as a journal, albeit not peer-reviewed.<sup>2</sup> Several individual Australian medical schools have had their own academic publications for varying periods, such as the *Sydney University Medical Journal*, which was first published around 1905.<sup>3</sup> More recently, our counterparts across the Tasman were well ahead of us, with the *New Zealand Medical Student Journal* releasing its first issue in 2004.<sup>4</sup> Further afield, some of the better known student journals are the *McGill Journal of Medicine (MJM)* in Canada and the *Student BMJ* in the United Kingdom.

Most student journals fall roughly into one of two categories: those whose focus is primarily instruction and entertainment, with shorter educational or blog-style articles (often written by non-students) having appeal to time-constrained students (eg, *Student BMJ*); and those that publish academically rigorous student work, perhaps at the expense of reader interest (eg, *MJM*). The AMSJ has a number of aims (Box), although central to our mission is to transcend this artificial tension and attract student-authored articles that are both thoroughly interesting and academically substantial. The rationale is that anything short of a

### Aims of the Australian Medical Student Journal<sup>5</sup>

- To provide a medium for Australian medical students to publish their work and share ideas with their peers.
- To provide a suitable forum for students to make the transition between assignment writing and producing publishable academic work.
- To inform students about medical topics and issues not typically addressed in core curricula.
- To facilitate discussion of current issues relevant to medical students.
- To allow Australian medical schools to showcase the research aspects of their programs.
- To provide a further incentive for students to produce high-quality work in their studies.
- To foster the next generation of Australian medical researchers and physician-scientists.
- To provide an avenue for students interested in a career in medical editing or publishing to pursue this interest as a student staff member. ◆