

Correspondence

Delayed dissection of the internal carotid artery following major facial trauma

Dr. Connor's well written case report on carotid artery dissection¹ bears a misleading title. The case described is that of a patient who developed a stroke some eight hours after a car accident. It is important to note that the dissection probably occurred *during* the accident, and the stroke was likely the result of thrombus formation at the dissection site leading to subsequent embolisation to the brain. This is not a trivial point. Cerebrovascular accidents following traumatic carotid artery dissection typically occur several hours to several days (of lucidity) after the injury.² Disabling stroke arising five months after traumatic internal carotid artery dissection has been described before.³ Acute strokes in relatively young people are often of traumatic origin, and the trauma may range from the obvious (as in Dr. Connor's patient) to the less obvious such as vomiting,⁴ sexual intercourse,⁵ instrumentation such as oesophagoscopy,⁶ and sports,⁵ triggering events that could only be identified by thorough history taking. Recognition of these characteristics should help to more accurately diagnose trauma as an important cause of acute stroke in young people.

The concurrent severe facial injuries might have contraindicated the early use of anticoagulation therapy in Dr. Connor's patient. This dilemma is often faced after traumatic carotid artery dissection. Aspirin is sometimes given for patients with dissection without ischaemic symptoms or patients with persistent carotid lumen irregularities after several months.² There is otherwise little guidance in the literature as to whether early institution of anti-platelet therapy or a milder form of anticoagulation in situations similar to Dr. Connor's case is justified. I would be most interested to learn if such alternative measures were considered in Dr. Connor's patient.

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In reply

Dr Ho correctly defines the exact sequence of events leading to the stroke some 8 hours post motor vehicle accident, and I thank him for emphasising the importance of this differentiation. Both subcutaneous and intravenous heparin anticoagulation were considered but not used because of the possible problems. I did not consider aspirin or other anticoagulation measures in this patient, but would do so if presented with a similar patient in the future

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Emergency management of seizures

The emergency management of severe life-threatening conditions is of concern to most clinicians. In this category, most would place the management of status epilepticus. It was therefore with great interest that I read the review by Dr. Durham in *Critical Care and Resuscitation* 1999;1:344-353. As Dr. Durham is working in an Australian hospital, I expected a review relevant to my own practice. Unfortunately, the recommended drug treatment is intravenous lorazepam.

This drug formulation is not available anywhere in Australia according to the Drug Information Centre at the Royal Adelaide Hospital. It is notable that the references to lorazepam are from the USA. As lorazepam is the first drug recommended both in the text and the table on treatment, this review is very misleading for Australian physicians. I think that reviews should be done by experienced authors giving practical advice. The review fails this test.

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In reply

I note with interest that Dr. Russell takes issue with the recommendation for the emergency management of status epilepticus, and wonder whether he has read my article. My abstract recommended that 'Initial treatment includes intravenous lorazepam (2-8 mg/70kg) or diazepam (5-20 mg/70kg) and phenytoin (1500 - 2000 mg/70 kg)' a statement based on a properly designed, randomised, double-blind multicentre trial.¹ While the journal may have a predominant Australasian distribution I see from recent correspondence that it does reach a very interested American audience, and thus the inclusion of lorazepam has relevance.^{2,3} In the main body of the article I stated 'In Australian practice diazepam and phenytoin are often used as the initial treatment rather than lorazepam',⁴ indicating our prevailing regional practice.

Both diazepam and lorazepam are equally effective in the initial control of grand mal seizures.¹ However lorazepam is less lipid soluble than diazepam and has a longer duration of anti-seizure effect (12 - 24 h) compared with diazepam (15 -30 minutes), a property that has made it preferable to diazepam (if a single agent is to be used) for the treatment of status epilepticus.⁵ In Australian practice, while intravenous lorazepam may not be readily available, it can be obtained under the Therapeutic Goods Act and has been previously used in Australia using such a mechanism. It is important to remember that if diazepam is used it must be followed by phenytoin, to have the same efficacy as lorazepam in controlling grand mal seizures.¹

Concerning the matter of experience: like beauty, this is in the eye of the beholder, and it is often just the memory of one's last case. In modern medicine, advice needs to be evidence-based rather than anecdotal. The advice concerning management of status epilepticus stands.

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Where the Birds still rule

The Bird™ Mark 7 ventilator continues to provide the majority of mechanical ventilation in the intensive care unit at the Port Moresby Hospital in Papua New Guinea. In the environment of regular interruptions to the power supply, variable oxygen supply pressures, and severe budget limitations to biomedical engineering, Dr. Gertrude Didei and her staff rely heavily on the Bird ventilator.

On a recent visit as a part of the MONAHP program, we were impressed to see the Birds coping with the steady through put of snake bite victims (often being managed without the availability of antivenom), trauma, and airway problems. Other newer generation ventilators have been tried, but the demands on maintenance and consumables have seen them not match the performance of the Bird.

While there are plans to acquire further newer generation ventilators, we suspect that for the foreseeable future the Birds will remain the work-horse of the Port Moresby hospital intensive care unit.

We are writing to appeal to the readership of '*Critical Care and Resuscitation*' to consider donating any Bird Mark 7 ventilators that are gathering dust in various nooks and crannies of Australian hospitals. The biomedical engineering department at Port Moresby hospital are very skilful at maintaining and cannibalising Birds to keep their flock going. We will be glad to hear from anyone, and to facilitate the donation of their no-longer-required Birds to the Port Moresby hospital.

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