Stroke at high altitude

To the Editor—T Chan and colleagues should be congratulated on their report of the stroke-like episode following a rapid ascent to altitude.[1] There are few points concerning differential diagnosis that are worth considering. Firstly, stroke or stroke-like episodes have been described in association with high altitude since 1895.[2] Thromboembolic aetiology is a possibility, although absence of risk factors and stay shorter than reported by Jha et al[3] may argue against that. The authors might also consider the possibility of a cryptogenic stroke due to paradoxical embolism. Consequent to hypoxic pulmonary vasoconstriction encountered at altitude, there is a rise in pulmonary vascular resistance and arterial pressure and increased likelihood of right to left shunting. Depending on the population studied, some 20 to 30% of individuals have an asymptomatic patent foramen ovale.[4] This, in the presence of a deep vein thrombosis, could provide a substrate for stroke. Secondly headache is not a usual feature of an ischaemic event. It is, however, a symptom of acute mountain sickness or high-altitude cerebral oedema and can also occur in posterior reversible encephalopathy syndrome (PRES) or migraine. While PRES is characterised by vasogenic oedema, it can precipitate intense vasospasm and cerebral infarction. Admittedly the patient has had no classical risk factors for PRES, but the distribution of lesions hints at this possibility.[5] Transient focal neurology occurring at altitude in patients with a history of migraines has also been reported.[6,7] Absence of radiologically evident vascular pathology and a degree of reversibility observed could reflect a vasospastic aetiology.

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Rational emergency stroke care in Hong Kong

To the Editor—Dr Eric Chan[1] makes the excellent point that we need to concentrate interventional stroke services in a small number of well-chosen locations within Hong Kong. This is particularly so given its relative rarity and the expertise required to achieve consistent high standards in this difficult therapeutic area. We have previously suggested that speed is of the essence in the delivery of acute interventional stroke care in Hong Kong.[2] As he states, Hong Kong has an excellent road network, which means that both primary diversion of critically ill patients and interfacility transfers are very feasible and have been shown to be safe.[3,4]

As previously suggested by us, these principles should also be extended to the management of acute ST elevation myocardial infarction in Hong Kong.[5] Our professional ambulance personnel in Hong Kong would be perfectly capable of triaging appropriate

patients with a high degree of accuracy if they were trained for the task.

Such a system-based approach to the management of these two common and disabling conditions may reduce mortality and save costs in the long run by improving timely access to definitive care.

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Management of Dravet syndrome: emerging clinical insights

To the Editor—The recent article by Mak et al[1] regarding Dravet syndrome provided for interesting reading. Treatment outcomes of patients with this syndrome have improved remarkably with the increased utilisation of newer drugs in combination with non-pharmacological therapeutic approaches.

For instance, recent studies have shown the effectiveness of a relatively new drug 'stiripentol', which not only decreases the frequency of seizures in patients with Dravet syndrome by almost 70% but also attenuates the risk of developing status epilepticus.[2] Stiripentol exerts its anti-epileptic features by acting on GABA-A receptors. Physicians should monitor patients taking this drug closely as it may result in marked anorexia. Valproic acid and benzodiazepines such as clonazepam remain the classic first-line alternatives for the management of seizures in patients with this condition.

A highly promising non-pharmacological approach is the introduction of a ketogenic diet. In a recent study, a 75 to 99% reduction in seizures was noted in nearly 63% of patients with Dravet syndrome following the initiation of such a regimen.[3] Recently, Nabbout et al[4] have reported that besides decreasing seizure frequency, ketogenic diets also improve behavioural abnormalities such as hyperactivity. Another non-pharmacological involves 'vagal nerve stimulation'.[5]

As is evident from the above discussion, a combined approach seems to be the most effective approach to mitigating morbidity in patients with Dravet syndrome.

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