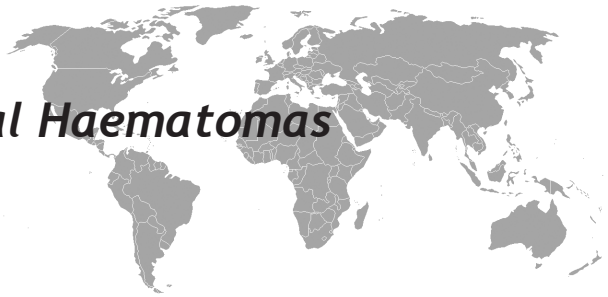

Management of Intracerebral Haematomas

a Mirage on the Ocean

Amit Agrawal

Spontaneous intracerebral hemorrhage (ICH) accounts for 9% to 25% of all strokes and has devastating conse¬quences. 1,2 More than 50% of patients die, and half of the survivors are left severely disabled. 2 One of the major management tasks is to find out whether the hemorrhage is secondary to underlying structural vascular abnormality, such as arteriovenous malformation (AVM) and aneurysm, so that appropriate treatment can be carried out to prevent rebleeding. 3 Diagnostic cerebral angiography should be considered for all spontaneous ICH patients except those over 45 years old with preexisting hypertension and hemorrhage in the thalamus , putamin or posterior fossa hemorrhage. 3 More recently, CT, CTA, MRI, and MRA have been employed as noninvasive screening procedures for the investigation of intracranial vascular abnormality.4,5,6 Spontaneous intracerebral hemorrhage is a major cause of death and disability, yet there is no convincing evidence of the benefit of any medical treatment and the role of surgery remains controversial. 7 Despite major advances in brain-imaging procedures, improvements in neurosurgi-cal critical care, and refinements in microsurgical techniques, only a few subgroups of patients with spontaneous intracerebral hematomas are usually listed as candidates for surgical treatment in the reported series. Several prospective, randomized, controlled clinical trials have been undertaken to compare surgical and medical treatment of ICH. They have been mostly single center studies involving small patient numbers and were inconclusive.8,9,10 Relative edema is strongly predictive of functional outcome in patients with hyperacute supratentorial spontaneous ICH without intraventricular extension. 11 A patient examined >6 hours after ictus who has a hematoma volume <25 cm3 is unlikely to experience further haematoma growth. Prevention of brain infarction and premorbid management of liver disease may serve to lower the risk of hematoma enlargement. It remains controversial whether antihypertensive drugs should be used in the acute phase of intracerebral hemorrhage. Poorly controlled diabetics with high systolic blood pressure (200 mm Hg) on admission are considered as significant risk factors for haematoma enlargement. 3,12 In the future, new studies looking at possible factors which influence morbidity-mortality of hemorrhag¬ic stroke will help to recognize those patients at risk earli¬er.13 Finally, the cost-effectiveness of the operative treatment re¬mains difficult to calculate. New randomized trials employ¬ing minimally invasive techniques still need to be performed. However, the shortening of the treatment period due to the accelerated reduction in ICP obtained with early surgery should lead to an indirect reduction in the global cost. 13 As we see the outcome of patients with spontaneous intracerebral haematomas has been improved remarkably and it is continuously supported by new diagnostic imaging modalities and well conducted prospective studies. However these advancements are mainly confined to the large centers. In spite of all these advancements care of these patients is a mirage on the ocean for the physicians working in remote areas of developing countries.

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