

Presidential Address – “Butterflies and Diving Bells”

Dr Hamsaraj Shetty

Dr Shetty started by explaining the title of his address. Jean Dominique Bauby, who was the editor of Elle, suffered a stroke and developed locked-in syndrome at a young age. His memoirs were followed by a film (The Diving Bell and the Butterfly) – which illustrated the devastating effects of stroke.

Dr Shetty then told the society a little about his personal background. He qualified in the medical college in the city of Mysore in India. He came to the UK in 1982 and talked of some of the cultural differences that he noticed between East and West. After coming to Cardiff he was guided by Prof Pathy, Dr Beck, Dr Jessop and Prof Routledge – he spoke highly of the support that he had received working for each of the above Consultants (3 of whom were in the audience). Following his registrar years, Dr Shetty worked in Southmead, Bristol but was then delighted to return to Cardiff a few years later. He described how he had a special interest in Stroke and had spent a sabbatical in America (Boston and Mayo Clinic Minnesota) in 2005 which transformed his approach to stroke.

Dr Shetty then proceeded to describe the advances in diagnosis and management of stroke.

1. The burden of stroke:

Stroke is the 4th leading cause of death in Wales.

Analysis of figures for stroke in Cardiff show that 20% will die and 46% of stroke patients will not regain independence.

The mortality of cardiovascular disease is declining considerably but the mortality of stroke is only coming down very slightly.

The cost from stroke is considerable (£15000 per patient over 5 years, but this is closer to £29000 per patient if informal care is included)

Dr Shetty explained that older people are at higher risk of stroke and as the population is an aging population we are likely to see a considerable increase in incidence of stroke in the next 10-20 years.

2. Understanding pathophysiology:

Originally strokes were divided into 2 groups – 80% ischaemic
20% haemorrhagic

These groups have now been subdivided:

Ischaemic – 50% large vessel

25% small vessel

20% cardio embolism

5% cryptogenic

Haemorrhagic – 20% sub arachnoid

80% intracerebral

Dr Shetty explained why it is important to identify the site of the stroke (both clinically and by imaging). For example, basal ganglia and

thalamichemorrhages are often hypertension related, cerebellar strokes are a medical emergency (due to confined space).

Imaging is important in diagnosing strokes– CT scan, CT angiogram, CT perfusion scan and various modalities of MRI are currently available.

CT scan is widely available and is the commonly used initial imaging to make decisions regarding thrombolysis.

Dr Shetty discussed some cases that he had treated. He mentioned one interesting case of cerebral vasoconstriction syndrome. The patient presented with episodes of hemianopia when she was stressed and symptoms settled when she relaxed.

A CT

angiogram during symptoms showed cerebral vasoconstriction syndrome. Her symptoms settled with verapamil.

3. Thrombolysis:

Dr Shetty described the first patient that was thrombolysed at UHW. He was a 62 year old gentleman who was usually fit and well, who presented with acute right sided weakness. A CT scan was consistent with left MCA infarct, CT perfusion scan showed reduced perfusion. He was thrombolysed within hours of onset of symptoms. Within 2 weeks he had regained full power and speech and eventually returned to work.

The benefit of thrombolysis decreases with time. Dr Shetty urged that we have to treat patients with thrombolysis as soon as possible – a 1 minute delay can result in the loss of 2 million neurones.

4. Stroke Units:

Treatment in designated units improves outcomes – comprehensive stroke units are best. Patients are more likely to be alive, independent and living at home in 1 year if treated in a stroke unit.

5. Secondary Prevention:

Most strokes follow a TIA. Treat a TIA as an acute medical emergency. Dr Shetty explained that very early treatment of TIA can reduce the risk of CVA by 80% (aspirin, BP control, statin).

In 1995 Dr Shetty set up a stroke prevention clinic in Cardiff – this was the first of its kind in Wales and is continuing.

Anti platelet therapy:

Dr Shetty discussed antiplatelet therapy for stroke prevention and that aspirin 75mg od and dipyridamole mr 200mg bd would be first choice after a TIA (clopidogrel if aspirin allergic).

Atrial Fibrillation:

As 1 in 6 CVA's occur in people with AF, Dr Shetty described the importance of addressing this risk factor. Rate control and anticoagulation generally being the best treatment – with warfarin being considerably better than aspirin in reducing the CVA risk.

Hypertension:

Reducing blood pressure reduces the risk of CVA. Overall reduction in risk of CVA by 37%.

Hyperlipidaemia:

Dr Shetty described this area as being a little controversial but that simvastatin 40mg is associated with significant reduction in non fatal or fatal stroke.

Carotid stenosis:

Those with a symptomatic carotid stenosis which is greater than 70% can benefit greatly from endarterectomy and many strokes can be prevented.

Dr Shetty concluded by reminding us that stroke continues to be an important cause of morbidity and mortality. Advances have been made in acute treatment of stroke but he stated that stroke and TIA need to be recognised as a medical emergencies. We also need to make better use of opportunities for prevention