Dear Sir,

It was with great pleasure that I read this paper in the July issue of the Journal[1]. The authors should be congratulated for their efforts to address the very important issue of stroke, and have rightly called for a concerted effort against Brain Attack.

I have a few minor comments that I hope the authors could address:

1. This was a retrospective study. The case notes on 22.3% were not obtainable. This is a sizeable proportion, almost a quarter of the studied patients. One thus wonders if the results derived from the remaining 77.7% (240 patients) can be safely extended to all the 309 stroke patients.

2. It may not be appropriate to state that the stroke patients are "young", or that "two-thirds were well below 70 years". From the paper, 32.5% were older than 70 years, 51.7% were 61– 70 years. This means that only 15.8% were below 61 years old. The median age thus must lie in the 61 – 70-year age group, and I suspect the mode and mean lie in this range too, not a group one may necessarily call young.

3. Presentation times to their hospital are dismal, and a stark contrast to the experience in Tan Tock Seng Hospital (TTSH). In our prospective study[2] of 486 consecutive admissions to TTSH between March and August 1996 for acute stroke (almost the same time as the paper which looked at admissions from October to November 1996), 41.4% arrived within 3 hours, 54.5% within 6 hours and 68.5% within 12 hours. This compares with 3.8%, 16.7%, 41.3% in the paper. This difference in arrival times between two large Singapore hospitals is a most interesting phenomenon.

4. The subtypes of stroke seen by the authors are also slightly different from our experience. We found a 44% (95%CI 39.6 – 48.4), frequency of lacunar strokes in our 1996 study[2], similar to the 39% (95% CI 33.6 – 44.4) found in our 1992 study[3], versus 20.6% (95% CI 15.0 – 26.2) in the paper. This is an unusual difference, and I wonder if it may be related to a different racial mix of patients attending the 2 hospitals.

5. It is unclear if the finding of hypertension in 80% refers to a history of hypertension prior to the stroke, or a finding of elevated blood pressure in the emergency room/hospital. In our study[3], 67.8% had a history of hypertension prior stroke. Blood pressures are often elevated in the acute phase of stroke for many reasons, and may not necessarily be due to existing hypertension. Elevated blood pressures often come down spontaneously in the succeeding hours to days. Aggressive lowering of blood pressure should generally be avoided in the acute phase of stroke[4].

I think we should all take heed of the authors' comments and work towards making our hospital systems more efficient, and looking more into stroke prevention and improved community services for stroke survivors.

Thank you.

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Authors' Reply

Dear Sir,

We would like to thank Dr Venketasubramanian for his encouraging letter. The following are answers to his queries:

1. There were 309 patients with the ICD-9 codes mentioned. For the remaining 69 patients, the record of clinical features of stroke were not clear to make a definite diagnosis of stroke. We therefore had to exclude these from the analysis.

2. We agree with Dr Venketasubramanian that those in the 61 – 70-year age group would not fit the strict definition of "young". A more accurate term would have been "younger than those in groups studied elsewhere"[1].

3. The time of onset of stroke in the paper was taken as the time when the patient was last well/ambulant or the time when they went to bed well, if they had woken up with the stroke symptoms.

4. We agree that a further breakdown of the various radiopathological findings in the stroke patients with regards to the patients' characteristics would shed more information on this sub-group of stroke patients.

5. Eighty per cent of our stroke patients had a history of hypertension prior to the onset of the current stroke event[2]. Coincidentally, at presentation, 80.9% had systolic blood pressure greater than 160 mmHg and 62.5% had diastolic blood pressure greater than 120 mmHg.

We hope that we have answered adequately.

Yours sincerely

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