



Service Priorities and Programmes Electronic Presentations

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Service improvement in stroke thrombolysis by the implementation of designated stroke ward and 24 hour on site thrombolysis nursing support.

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Introduction

Intravenous thrombolysis by tissue plasminogen activator had been shown to be beneficial to acute ischaemic stroke patients, presented within 4.5 hours window. And the benefit will be improved by the shortening of the onset to needle time. With the implementation of designated stroke ward and 24 hour on site thrombolysis nursing support since 2014, the study aims to show the improvement in stroke thrombolysis improvement.

Objectives

The study aims to show the improvement in stroke thrombolysis improvement.

Methodology

Patients' data were prospectively recruited over 7 years period from 2009 till 2015. Time intervals during the thrombolysis management were recorded. Prespecified stroke severity and outcome parameters were the National Institutes of Health Stroke Scale (NIHSS) score before treatment, occurrence of symptomatic intracerebral haemorrhage (SICH) and modified Rankin Scale at three months after stroke. Data between 2009 to 2013 and 2014 to 2015 were compared and analyzed.

Result

Over the 7 years period, 409 patients were treated by intravenous thrombolysis. 216 patients were treated from 2009 to 2013 while 193 patients were treated from 2014 to 2015. The severity of stroke patient treated was significantly increased since the baseline NIHSS score was significantly increased from 12 (before 2014) to 15 (after 2014) ($p = 0.019$). The efficiency was improved as reflected by the significant reduction of the median door-to-needle time from 79 minutes (before 2014) to 62 minutes (after 2014) ($p < 0.001$). Symptomatic intracerebral haemorrhage was also reduced from 3.7% to 2.6%. Despite the increase in severity in the stroke patient treated, similar proportion of patients had achieved excellent functional outcome at

three months (49.2% vs 44.8% , $p = 0.413$).

With the implementation of designated stroke ward and 24 hour on site stroke thrombolysis nursing support, the efficiency and safety of the service was improved.