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Time equals brain subjective barriers to thrombolysis in the regional setting

We retrospectively analyzed 656 stroke admissions over 3-years from a major regional referral center in Australia to determine factors which influenced the Door-To-Needle (DNT) time for Intravenous Thrombolysis (IT). Factors analyzed included age, gender, baseline National Institute of Health Stroke Scale (NIHSS) score, onset time, arrival time, arrival to CT time and CT reporting time. From 656 stroke admissions, 70 cases underwent IT with the mean DNT of 108 minutes (ranging from 33 to 232 minutes), with mean onset to hospital arrival time of 85 minutes and mean arrival to CT completion time of 31 minutes. Multiple regression analysis showed a linear inverse correlation between DNT and onset to arrival time ($p < 0.01$). For every 30-minute delay in hospital arrival, there was a reduction in DNT of 13 minutes (95% CI 4–22 minutes). Our results parallel other trials which have showed similar inverse relationships between onset to arrival time and DNT. This relationship remained statistically significant when accounting for the patient's age, gender, NIHSS score and arrival to CT time ($p < 0.01$). Past experience has shown that part of this result can be attributed to a lack of urgency for initiating IT when patient's present sooner to hospital. This can be explained by a rotating roster of low experience medical workforce with only some training into acute stroke management. To compensate, a prospective education trial is being conducted to stress the importance of the time equals brain motto to attempt to reduce DNT to less than 80 minutes. The results are anticipated to be available in 2019.

Biography

Udit Nindra is Neurology and Stroke Registrar and Researcher, completed his Medical training from the University of New South Wales. Currently he is pursuing his Master's degree in Medicine (Internal Medicine) from the University of Sydney.

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