

## Prediction Factor of Recurrence Supraventricular Tachycardia After Adenosine Treatment in the Emergency Department

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**Abstract :** Background: Supraventricular tachycardia (SVT) is an abnormally fast atrial tachycardia characterized by narrow ( $\leq 120$  ms) and constant QRS. Adenosine was the drug of choice; the first dose was 6 mg. It can be repeated with the second and third doses of 12 mg, with greater than 90% success. The study found that patients observed at 4 hours after normal sinus rhythm was no recurrence within 24 hours. The objective of this study was to investigate the factors that influence the recurrence of SVT after adenosine in the emergency department (ED). Method: The study was conducted retrospectively exploratory model, prognostic study at the Emergency Department (ED) in Faculty of Medicine, Ramathibodi Hospital, a university-affiliated super tertiary care hospital in Bangkok, Thailand. The study was conducted for ten years period between 2010 and 2020. The inclusion criteria were age  $> 15$  years, visiting the ED with SVT, and treating with adenosine. Those patients were recorded with the recurrence SVT in ED. The multivariable logistic regression model developed the predictive model and prediction score for recurrence PSVT. Result: 264 patients met the study criteria. Of those, 24 patients (10%) had recurrence PSVT. Five independent factors were predictive of recurrence PSVT. There was age  $> 65$  years, heart rate (after adenosine)  $> 100$  per min, structural heart disease, and dose of adenosine. The clinical risk score to predict recurrence PSVT is developed accuracy 74.41%. The score of  $> 6$  had the likelihood ratio of recurrence PSVT by 5.71 times Conclusion: The clinical predictive score of  $> 6$  was associated with recurrence PSVT in ED.

**Keywords :** clinical prediction score, SVT, recurrence, emergency department

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