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### Recurrence rate of PSVT (Paroxysmal Supraventricular Tachycardia) in Rajavithi Emergency Department

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#### Abstract

**Background:** PSVT (Paroxysmal Supraventricular Tachycardia) is a common heart disease, especially in young people. Although PSVT is not a life-threatening illness, its symptoms occur in a sudden onset and with increasing frequency. Because of the severity of its symptoms, it can interfere with patients' quality of life and lead to an increase in anxiety levels. The authors found that patients with PSVT tended to have recurrence of symptoms; however, there has been no previous study in Thailand of the rate of recurrent PSVT in adults. Moreover, there has been no study of the factors which precipitate PSVT, cause recurrence, and result in hospitalization.

**Objective:** To study the rate of recurrence of PSVT within 90 days, the precipitating factors that cause PSVT, and the relationship between the factors that affect recurrence of symptoms and result in admission to hospital.

**Material and Method:** This was a cross-sectional study of patients who had been diagnosed with PSVT and were treated in the emergency room at Rajavithi Hospital from 1st August 2008-31st August 2011. The primary outcome was recurrence of PSVT within 90 days and its impact on hospital admission.

**Results:** The 55 patients in the present study visited the hospital 94 times. The authors found that: 20.0% of patients had recurrence of PSVT within 90 days; 45.7% of patients had no precipitating factors; 33.0% of patients had emotional stress; and 20.0% of patients had stopped taking their medication. Patients who presented at their first visit with a heart rate of more than 200 beats per minute were more likely to have recurrence (statistically significant, HR 2.43,  $p = 0.017$ ). Patients presenting with low systolic blood pressure (SBP < 90 mmHg), long duration of symptoms, structural heart disease, low serum Hematocrit concentration (Hct < 30%), serum sodium < 135 milligram, and serum potassium < 3.5 milligram were more likely to be admitted to hospital (statistically significant at  $p = 0.013, 0.012, 0.004, 0.001, 0.001, \text{ and } 0.004$  respectively).

**Conclusion:** There was a high rate of recurrence of PSVT in patients in the emergency department at Rajavithi Hospital. Significant factors affecting recurrence were patients presenting with initial heart rate of over 200 beats per minute. Low systolic blood pressure, long duration of symptoms, structural heart disease, low serum Hematocrit, low serum sodium and serum potassium were associated with hospitalization.

**Keywords:** PSVT (Paroxysmal Supraventricular Tachycardia), Heart rate

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