

Prevalence of Panic Disorder Documented Among A Population with Paroxysmal Tachyarrhythmia

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Abstract

Panic symptoms are commonly experienced by patients with paroxysmal tachyarrhythmia, but the diagnosis of paroxysmal tachyarrhythmia is often missed or delayed due to the lack of awareness or insufficient rhythm detection techniques. A retrospective survey of the medical records of 758 consecutive patients with paroxysmal tachyarrhythmia documented by electrophysiologic studies from 1996 to 2007 in one medical center was conducted. Objective and subjective assessments of paroxysmal tachyarrhythmia symptomatology and panic disorder were made. Historical and follow-up data were obtained in telephone interviews using a standardized questionnaire. Of 758 consecutive patients diagnosed with tachyarrhythmia by electrophysiologic studies, useful data for 705 (93%) patients were obtained. The median age of patients at the time of electrophysiologic study was 52 years; 66% of the patients were female. The median time from initial attack to definitive diagnosis of tachyarrhythmia was 2.1 years. The first evaluations were performed by physicians in emergency departments (35%), cardiologists (36%), and primary care physicians (26%). Almost all patients had symptoms of palpitation and shortness of breath; 46% of the patients fulfilled the diagnostic criteria for panic disorder. Symptoms of unrecognized tachyarrhythmia mimicked panic disorder, with 46% of the patients with documented paroxysmal tachyarrhythmia also fulfilling the diagnostic criteria for panic disorder. When panic disorder was initially diagnosed, it delayed the diagnosis of underlying tachyarrhythmia. Physicians must have a high suspicion for tachyarrhythmia when diagnosing panic disorder. (J Intern Med Taiwan 2010; 21: 42-47)

Key Words : Panic disorder, Paroxysmal tachycardia, Differential diagnosis, Ambulatory electrocardiography

Introduction

Patients with paroxysmal tachyarrhythmia commonly experience panic symptoms such as palpitation, chest distress, or shortness of breath¹. Diagnosis of paroxysmal tachyarrhythmia is often

delayed due to the diagnosis of occasional panic attack; the cardiac rhythm detection techniques are usually not performed at the right time². When patients have attacks without a definitive diagnosis time after time, a psychiatric diagnosis, such as neurosis or panic disorder, is usually made³. We

designed this study to evaluate systematically the prevalence of panic disorder in a patient population with documented paroxysmal tachyarrhythmia.

Patients and Methods

A retrospective survey of 758 consecutive patients with paroxysmal tachyarrhythmia documented by electrophysiologic studies performed from 1996 to 2007 in the cardiac catheterization lab of Chi-Mei Medical Center was conducted. This study was approved by internal review board of Chi-Mei Medical Center. Objective and subjective assessments of paroxysmal tachyarrhythmia symptomatology were made, including the application of the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) for panic disorder. The medical records at Chi-Mei Medical Center were retrospectively reviewed to obtain medical and historical information relating to patients with paroxysmal tachyarrhythmia. Follow-up information, as well as further historical information, was obtained in a telephone interview using a standardized questionnaire (Table 1).

Diagnostic criteria of panic attack from DSM-IV

(Diagnostic and Statistical Manual of Mental Disorder. 4th ed. American Psychiatric Association)

A discrete period of intense fear or discomfort, in which four (or more) of the following symptoms developed abruptly and reached a peak within 10 minutes:

1. palpitations, pounding heart, or accelerated heart rate
2. sweating
3. trembling or shaking
4. sensations of shortness of breath or smothering
5. feeling of choking
6. chest pain or discomfort
7. nausea or abdominal distress
8. feeling dizzy, unsteady, lightheaded, or faint
9. derealization (feelings of unreality) or depersonalization (being detached from oneself)
10. fear of losing control or going crazy
11. fear of dying
12. paresthasias (numbness or tingling sensations)
13. chills or hot flushes

Table 1. Questionnaire

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1. When did the symptoms related to cardiac arrhythmia or panic disorder first bother you?
 2. How frequent were the symptoms?
 3. What kind of symptoms did you have? (Use the open-ended question in the beginning, then use leading questions to check symptoms of panic attack if the patient cannot recall the symptoms any more) For example, " Did you have accelerative heart rate (dizziness or nausea/ shortness of breath/ cold sweating/ chest distress/ chills or hot flushes/ tremor/ numb extremities/ fear of losing control/ fear of dying/ feeling of unreality/ feeling of choking) when the illness attacked? "
 4. What specialist did you choose as your first aid?
 5. What was the first diagnosis? Maybe including arrhythmia, panic disorder, anxiety disorder, autonomic dysfunction, symptoms related to the emotional stress, etc.
 6. How long did it take you to get the definitive diagnosis of arrhythmia from the first onset of symptoms?
 7. Did you get the complete remission after catheter ablation?
 - 7-1. If "yes," how long have you been in complete remission?
 - 7-2. If "No," what kinds of symptoms still bother you? How frequently?
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DSM IV Criteria for Panic Disorder

A. Both (1) and (2)

- (1). recurrent unexpected Panic Attacks
- (2). at least one of the attacks has been followed by 1 month (or more) of one (or more) of the followings:
 - (a). persistent concern about having additional attacks
 - (b). worry about the implications of the attack or its consequences (e.g., losing control, having a heart attack, "going crazy")
 - (c). a significant change in behavior related to the attacks

B. The Panic Attacks are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hyperthyroidism).

C. The Panic Attacks are not better accounted for by another mental disorder, such as Social Phobia (e.g., occurring on exposure to feared social situations), Specific Phobia (e.g., on exposure to a specific phobic situation), Obsessive-Compulsive Disorder (e.g., on exposure to dirt in someone with an obsession about contamination), Posttraumatic Stress Disorder (e.g., in response to stimuli associated with a severe stressor), or Separation Anxiety Disorder (e.g., in response to being away from home or close relatives).

Results

Of 758 consecutive patients with tachyarrhythmia, standardized questionnaires were obtained from 705 (93%); 43 patients who could not be contacted by telephone and 10 patients who could not provide adequate information were excluded. The demographic and baseline medical characteristics of the subjects are shown in Table 2. The median patient age at the time of electrophysiologic study was 52 years; 66% of the patients were female.

Table 2. Demographic and baseline medical characteristics

	Patients	%
Male	240	34%
Female	465	66%
Medications before EP study*		
β -blocker	154	48%
Anti-arrhythmics	40	12%
Anxiolytics	106	33%
The first evaluation by		
Dr. in emergency department	247	35%
Cardiologist	254	36%
Primary care physician	182	26%
Other	22	3%

EP = electrophysiologic, Dr. = physicians.

*Data were available for 320 patients.

The first evaluations of panic-like symptoms were completed by physicians in the emergency department (35%), cardiologists (36%), or primary care physicians (26%); only 3% of patients were evaluated by others. The median time from initial attack to definitive diagnosis of tachyarrhythmia was 2.1 years. Almost all patients had symptoms of palpitation and chest distress. The total number of panic-like episodes among patients before undergoing electrophysiologic studies is shown in Figure 1. The percentages of patients with panic attack symptoms during tachyarrhythmia episodes are presented in Figure 2. Panic-like episodes were commonly reported during tachyarrhythmia; 88% of patients experienced four or more such symptoms. Of the patients reporting panic-like or tachyarrhythmia episodes, 46% also fulfilled the diagnostic criteria for panic disorder.

According to electrophysiologic testing, the mechanisms for tachyarrhythmia were atrioventricular nodal reentrant tachycardia (AVNRT) in 413 patients (58.6%), and atrioventricular reciprocating tachycardia (AVRT) in 235 (33.3%), ventricular tachycardia in 13 (1.8%), atrial tachycardia in 18 (2.6%), atrial flutter in 10 (1.4%), and atrial fibrillation in 46 (6.5%)

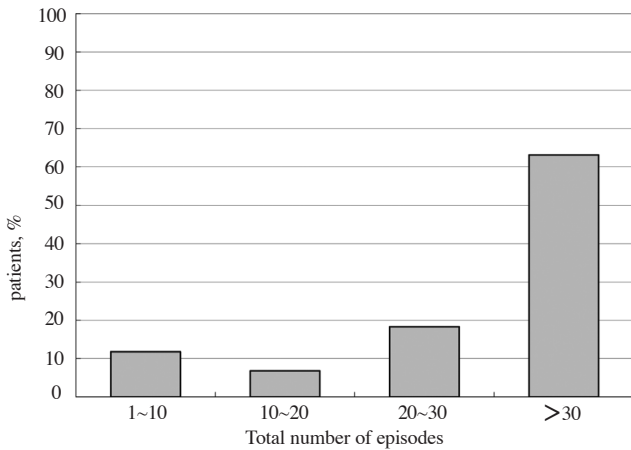


Fig. 1. The total number of panic-like episodes in patients before electrophysiologic study.

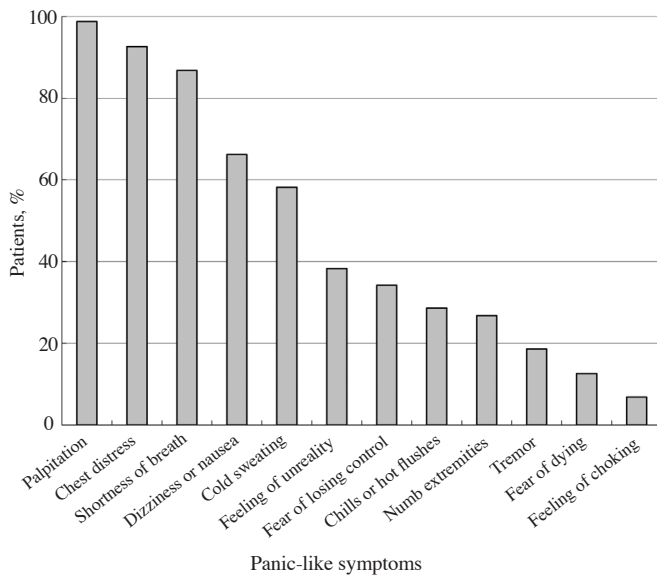


Fig. 2. The percentage of panic-like symptoms.

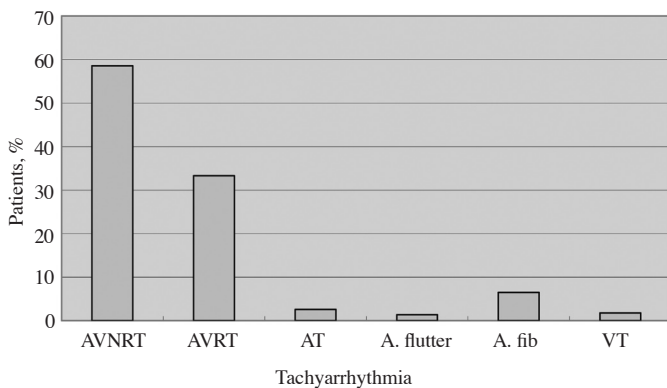


Fig. 3. The mechanisms for tachyarrhythmia.

AVNRT = atrioventricular node reentry tachycardia. AVRT = atrioventricular reciprocating tachycardia. AT = atrial tachycardia. A. flutter = atrial flutter. A. fib = atrial fibrillation. VT = ventricular tachycardia.

(Figure 3). One patient had both AVNRT and AVRT. Atrial fibrillation was found in 26 patients with AVNRT or AVRT. The mean spontaneous tachycardia rate was 189 beats/minute for patients with AVNRT, while the induced tachycardia rate was 186 beats/min. The mean spontaneous tachycardia rate was 198 beats/minute for patients with AVRT, while the induced tachycardia rate was 193 beats/min.

Discussion

The prevalence of panic disorder in the population of patients with documented paroxysmal tachyarrhythmia was 46%, which was less than that (67%) in the study by Lessmeier et al⁴. Most (71%) of our patients had their first evaluation by physicians in the emergency department or by cardiologists; in comparison, Lessmeier et al reported that 55% of their patients were first evaluated by emergency department physicians or cardiologists⁴. We believe that physicians in the emergency department and cardiologists are more familiar with tachyarrhythmia than other practitioners. Furthermore, the greater the percentage of patients evaluated by these doctors, the lower the rate of misdiagnosis of tachyarrhythmia and the fewer misdiagnoses of panic disorder there should be³. This may be one of the reasons why our patients with panic-like episodes endured a shorter period with incorrect diagnoses. The median time from the initial attack to the definitive diagnosis of tachyarrhythmia was 2.1 years in our series and 3.3 years in the latter series⁴.

Although patients endured panic attacks, they felt very embarrassed to visit psychiatrists in Taiwan⁵. Under the services of National Health Insurance in Taiwan, patients can choose any kind of doctor considered eligible by patients themselves, without a medical referral. The health service system could have resulted in a higher percentage of patients who were first evaluated

by cardiologists or physicians in emergency departments in Taiwan. In addition, doctor shopping is a common behavior of people seeking medical advice ⁶.

Morris et al⁷ reported a panic disorder rate of 12.5% among cardiac outpatients. In our study, the medical charts reviewed showed usage of anxiolytics among 33% of the patients. Furthermore, panic disorder was often a comorbid condition of heart disease, adding to the confusion of tachyarrhythmia diagnoses.

Although diagnostic criteria of panic disorder from DSM-IV pointed out that, the clinicians have to rule out the other general medical condition, including arrhythmias before diagnosis, but this is hard in clinical practice. No studies ever quantified the prevalence of tachyarrhythmias among panic disorder. The possible reasons include: 1. there are many overlap between the symptomatic profile in these two illness. 2. Tachyarrhythmias could only be sure by event monitoring or other procedures, and the patients usually need to perform the diagnostic procedure more than once.

The course of these patients may have two possibilities: 1. They are truly the case of arrhythmia but was misdiagnosed as panic disorder. 2. Initially they are cases of arrhythmia, after several times of attacks, the patients became more and more anxious, thus result in sympathetic tone elevation, then panic disorder developed later. Therefore these two illness became concomitant.

Study Limitation

This was a retrospective study from a single hospital with small sample size. The patients in the study were obtained from the medical center, not a sample from the general population. Therefore, this result cannot generalize to general population. Prospective studies are needed to assess the actual prevalence of PSVT or other arrhythmias for patients with panic disorder.

Conclusion

In this study, symptoms of unrecognized tachyarrhythmia mimicked panic disorder. Almost half (46%) of the patients with electrophysiologically confirmed paroxysmal tachyarrhythmia also fulfilled the diagnostic criteria for panic disorder.

We suggest that, among patients diagnosed as panic disorder whom were poor response to psychiatric treatment, no past history of neurotic disorder, the attacks are characteristic as sudden onset and sudden cease, just like on-off switch, should consider to consult cardiologist for further survey.

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陣發性快速不整脈病患合併恐慌症

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摘 要

陣發性快速不整脈病患通常會有恐慌症的經驗，然而陣發性快速不整脈可能被誤診、沒被察覺或電氣生理檢查不完備而延誤下來。將單一醫學中心1996年至2007年電氣生理學研究登錄的758個陣發性快速不整脈病患給予追蹤調查。陣發性快速不整脈癥候和恐慌症皆予以客觀和主觀的評估。至於病史資料和追蹤資料之取得則採用標準化問卷電話訪問。電氣生理學研究診斷出來的連續758個陣發性快速不整脈病患中，有效資料達705人(93%)。電氣生理學研究病患的平均年齡為52歲，66%是女性病患，從初次發作到確切診斷為快速不整脈的平均時間為2.1年。第一次診斷的科別急診佔35%，心臟內科佔36%，其他第一線照顧醫生佔26%。幾乎所有的病患皆有心悸和呼吸短促的症狀，46%的病患更達到恐慌症的診斷標準。未被確認的快速不整脈之症狀疑似恐慌症，陣發性快速不整脈的確診病患中有46%同時達到恐慌症的診斷標準。當恐慌症初次被診斷出來時，它耽誤了潛伏的快速不整脈之診治，因此，當診斷為恐慌症時，醫生必須高度警覺是否有快速不整脈之問題。