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Patients with noncardiac chest pain and benign palpitations referred for cardiac outpatient investigation: a 6-month follow-up☆

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Abstract

Objectives: The aims were to (a) study the characteristics and outcome in patients with noncardiac chest pain or benign palpitations referred for cardiac evaluation, (b) compare psychological characteristics in the two groups, (c) identify predictors of outcome (d) and explore characteristics of patients who wanted psychological treatment.
Methods: The patients (N=154) were first evaluated by a psychiatrist and than by a cardiologist at the initial attendance and by self report after 6 months.
Results: Thirty nine percent had at least one *DSM-IV* psychiatric disorder at attendance. At the 6-month follow-up, 43% still had clinically significant complaints and/or impaired function. Patients with palpitations were more likely to be female, younger and less likely to attribute cardiac symptoms to heart disease, but had otherwise similar psychological features to noncardiac chest pain patients. Depression score at attendance predicted significant complaints at follow-up. Interest in psychological treatment was associated with more fear of bodily sensations, more impaired function, and greater tendency to attribute symptoms to heart disease.
Conclusion: Psychiatric disorders were common. The 6-month outcome was poor and was associated with the depression score at attendance. Patients with fear of bodily symptoms and impaired function were most interested in psychological treatment.

Keywords: Chest pain; Palpitations; Follow-up; Interest in treatment

1. Background

Chest pain and palpitations are common in the general population, with prevalence rates of 20–40% and 11%, respectively [1–3], and are the two most common reasons for referral to a cardiologist [4]. In cardiac settings, a considerable proportion of these patients have no heart disease or other medical disorder that can account for their symptoms [5–7]. Previous studies in cardiac settings have found a high frequency of psychiatric disorders (25–50%), especially panic disorder (PD) [6,8,9] and reduced quality of life [10–13] among these patients. Follow-up studies have reported poor outcomes in terms of maintenance of symptoms that affect daily life, worry about the heart, and increased use of health care services. This is especially true for patients with psychiatric disorders [14–16], who are rarely offered any specific treatment besides the cardiac evaluation [17,18].

During the past decade, there has been a change in referral policy for patients with acute coronary syndrome. Most of

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these patients are now hospitalized urgently and not referred for outpatient evaluation. Whether this new referral policy has led to fewer cases with acute symptomatology (e.g., PD) has not been investigated thoroughly [19]. On the other hand, continual provision of information about the importance of early detection of cardiac disorders might have lowered the threshold for referrals.

Most research has focused on chest pain patients, whereas less attention has been given to those with palpitations. The importance of improving health care for patients with noncardiac chest pain is well documented [15,16]. Whether patients with palpitations have the same needs has not been investigated thoroughly.

In both patients with noncardiac chest pain and benign palpitations, there is some evidence of an association between psychiatric disorders and subsequent poor outcome [14,15]. However, there is a need to identify the predictors of poor outcomes and to explore their value for screening patients.

Cognitive behavioural therapy has been documented to be effective in treating patients with noncardiac chest pain and benign palpitations [20,21], but a low percentage of eligible patients (40–60%) elect to seek such treatment. It is of interest to enhance the understanding about the characteristics of the patients who want to participate in psychological treatment, in order to target them for psychological treatment.

The aims of the present study were to:

(1) describe the clinical status prior to cardiac evaluation and at 6-month follow-up for patients with noncardiac chest pain and benign palpitations;
(2) compare the psychological characteristics of patients with noncardiac chest pain and benign palpitations;
(3) identify factors that predict poor outcome and evaluate theirs suitability for screening and
(4) identify factors associated with the patients' interest in psychological treatment.

2. Methods

2.1. Patients

Consecutive patients referred to the cardiac outpatient unit at the Molde Hospital in Norway between May 2006 and May 2007 for evaluation of chest pain or palpitations were asked to participate. This outpatient clinic receives all referrals in a catchment area of about 75,000 inhabitants.

The head of the cardiac unit screened all referrals. The inclusion criteria were: (1) referral for a main complaint of chest pain or palpitations; (2) age 18–65 years and (3) ability to understand and write the Norwegian language. The exclusion criteria were: (1) mental retardation; (2) psychosis; or (3) organic heart disease confirmed by a cardiologist. Among 219 consecutive patients, 21 cancelled both the cardiac and psychiatric evaluation, and 36 did not want to participate in the study. A total of 162 patients participated in the psychiatric and cardiac evaluations at admission (Fig. 1). Of these, eight were excluded, six because of coronary heart disease confirmed by the cardiac evaluation (five in the chest pain group and one in the palpitation group), one because of lack of Norwegian language competency, and one because of mental retardation. No arrhythmias in need of treatment were detected.

In the final sample, which comprised 154 patients, 107 were referred because of chest pain and 47 because of palpitations. The 36 patients who did not want to participate in the study did not differ significantly from the participants on age, sex, prevalence of heart disease (as assessed by the cardiac evaluation), or chest pain/palpitations ratio.

2.1.1. Sample at the 6-month follow-up

Of the total sample of 154 patients, 138 (90%) responded to mailed questionnaires at the 6-month follow-up: 95 (89%) in the chest pain group and 43 (91%) in the palpitations group (Fig. 1). The participants who did not participate at follow-up did not differ from the participants who responded on sex, age, prevalence of psychiatric disorders, or scores on any variable with importance for the outcome (i.e., depression, anxiety symptoms, and avoidance).

2.1.2. Cardiac evaluation

The patients referred for chest pain underwent a standard bicycle stress test. If the cardiologist found the results consistent with coronary heart disease or if there was doubt about the diagnosis, the patients were referred for myocardial scintigraphy or coronary angiography. The patients referred for palpitations were monitored with Holter monitoring. If there was doubt about the conclusion from the Holter monitoring, the patients also underwent 7 days of electrocardiography monitoring (R-test) or a bicycle stress test.

2.2. Assessments at attendance

Sex, age, marital status, education, work status, duration of symptoms and days on sick leave during the three months before the consultation were registered at attendance.

Psychiatric disorders were assessed using the Structured Clinical Interview for *DSM-IV* Axis I disorders [22]. The interviews were performed by the first author, an experienced psychiatrist, who was trained in the use of the instrument. For current diagnoses, the criteria had to be met within one month before the interview; for lifetime diagnoses, the criteria had to be met previously or currently. All patients were informed about the results of the psychiatric evaluation.

2.2.1. Depression, anxiety, and health-related quality of life (HRQOL)

The Beck Depression Inventory (BDI) [23] measures the level of depression. The BDI comprises 21 items that are rated on a 0–3 scale.