ORIGINAL ARTICLE

PSYCHIATRIC CO-MORBIDITY AND ITS ASSOCIATED FACTORS IN PATIENTS WITH NON CARDIAC CHEST PAIN: A STUDY FROM A TERTIARY CARE HOSPITAL, KOLKATA

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ABSTRACT

Background: Chest pain is a common symptom for patients to attend hospital outdoor all over the world. Majority of the chest pain is due to non-cardiac causes. Both organic and psychiatric causes contribute to the causes of non-cardiac chest pain.

Objectives: To find out the socio-demographic profile of the study population, types of psychiatric disorders present in the study population and to find out the association between the presence of psychiatric disorder in the study population with the relevant socio-demographic variables.

Material and Method : This is a hospital based descriptive cross sectional study done on 88 diagnosed patients of noncardiac chest pain in the Department Of Psychiatry ,Calcutta National Medical College in the time period of January to July 2011 .Data were collected with the help of predesigned pretested proforma and analysed by SPSS 16.0 .

Results: The study revealed that the mean age of the study population was 35.91 years .Most (37.5%) of the study population were having middle school education. Regarding psychiatric co morbidities present 58(65.9%)of the study population had psychiatric disorder in some form . Of these 58 (65.9%) patients majority (44.9%) were having panic disorders followed by depressive disorders (36.2%). Presence of psychiatric disorder was significantly more in married people (p= 0.011), nuclear family (p =0.002), people from rural areas (p=0.001), lower socioeconomic status (p=0.014).

Conclusion: No significant association of presence of psychiatric disorder with religion, sex, educational status or occupation was found.

Keywords: Psychiatric co-morbidity, noncardiac chest pain

INTRODUCTION

Across the globe it has been found that chest pain is a common reason for patients to attend out patient department. But the cause of pain in 50% of these patients is non cardiac[1].

Worldwide and among different cultural groups, bodily symptoms are the most common individual expressions of social problems and emotional distress [2] .This is true for chest pain also. Chest pain as a bodily symptom unexplained medically is frequently seen in people seeking treatment at first and second step health institution [3].

Over 50% of patients with chest pain are diagnosed by cardiologists with chest pain unrelated to the cardiac symptoms [3].

Non cardiac chest pain can be defined as recurrent angina like substernal chest pain thought to be unrelated to the heart after a reasonable cardiac evaluation [3].

Chest pain is persistent in 50% to 70% of non cardiac chest pain and 19% to 51% of the patients experience occupational problems[3].

Most of the time, chest pain cases in which an organic aetiology cannot be determined over time and those presenting with atypical features should be evaluated as a component or as an accompanying symptom of various specific psychiatric disorders primarily panic disorders and depression[3].

In a study on 167 patients with chest pain not associated with cardiac disease by Danmen J etal [4]. 41.3% of the patients had panic disorder, 18.6% had somatoform disorder, 9.5 % had social phobia, 6% generalised anxiety disorder and 7.2% had major depressive disorder[4].

Studies on non cardiac chest pain though common in Western countries is scarce from the Indian subcontinent. Presently non communicable diseases are more and more area of concern for the people of Indian subcontinent. Thus this study was planned in a premier teaching hospital in Kolkata, India which caters not only population from the state of West Bengal but also the adjoining states.

OBJECTIVES

- To assess the socio-demographic profile of the patients of non cardiac chest pain attending the Department of Psychiatry, Calcutta National Medical College, Kolkata.
- To find out the types of psychiatric disorders present among those patients.
- To find out the association between different relevant socio-demographic variables and the presence of psychiatric disorder in the study population.

MATERIAL AND METHODS

It was a hospital based cross-sectional, observational study done in the Out Patient Department of Department of Psychiatry, Calcutta National Medical College, Kolkata.. The study was done after obtaining permission from the ethical committee.

All the patients of non cardiac chest pain attending the Out Patient Department of Department of Psychiatry during the study period was included in the study. The study period was from January 2012 to July 2012

From the record available from the Department of Psychiatry for last five years the average number of non cardiac chest pain patients attending came to be 150 per year. There was not much variation in the yearly attendance of patients of non cardiac chest pain. To compare the results of the study with the similar kind of study by Hocoglu Cicek et al[3], done on 70 patient of non cardiac chest pain. the study period of 6 months was chosen as the expected number of non cardiac chest pain cases in the said period of six months came to be 75 .The operational definition of Non- Cardiac chest pain used was "Non cardiac chest pain" is defined as pain in the chest without any cardiological problem after proper evaluation by a consultant cardiologist. The inclusion criteria of the study were written consent from the patient or his/her caregiver and presence of at least one accompanying family member/ relative/ anyone knowing about the patient. Data collection was continued for the period of six months. In this period of six months 88 patients of non cardiac chest pain fulfilling the inclusion and exclusion criteria were included in the study.

Pre-designed pre-tested semi structured questionnaire containing socio-demographic information namely - age, sex, address, religion, education, occupation, marital status, family type, number of family member etc. was used. Mini International Neuropsychiatric Interview (MINI)(Bengali Version 5.0.0): for diagnosis of psychiatric disorders.and Modified Prasad scale (AI CPI, Oct2011) for socio-economic status evaluation were used in the present study .

RESULTS

The present study done on 88 patients revealed that the mean age of the study population was 35.91 years with a standard deviation of 9.82 years (35.91 ±9.82 years) where the maximum (37.5%)were in the age group of 26 -35 years .(Table 1)

Table 1: Age distribution of the study population

Age group	Number (%)(n = 88)
< 25	12 (13.6)
26-35	33 (37.5)
36-45	28 (31.8)
46-55	12 (13.6)
> 56	3 (3.5)
Total	88 (100)

More than half of the study population were female. Most (37.5%) of the study population were having education in the middle school standard In this study most (39.77%) of the patients were house wife followed by business (21.59%) in case of occupation. In the study majority (70.45%) were married. And majority (63.6%) of the study population were from rural area. In the present study majority were Hindu (75%) and belonged to nuclear (64.8%) family. Most of the patients (43.18%) were in the lower middle class followed by upper middle class (34.09%). (Table 2)

Table 2: Distribution of the study population according to socio economic status

Socioeconomic status	Number (%)
Lower middle class	38 (43.1)
Upper middle class	30 (34.4)
Upper lower class	12 (13.5)
Upper class	8 (9.0)
Total	88 (100)

Table 3: Distribution of the study population according to the type of psychiatric disorders

Diagnosis	Number (%)
Anxiety Disorder	2 (3.4)
Depressive disorder alone	17 (29.3)
Depressive disorder + OCD	1 (1.7)
Depressive disorder + Panic disorder	3 (5.2)
Generalised anxiety disorder	3 (5.2)
Obsessive Compulsive disorder	3 (5.2)
Panic Disorder	26 (44.9)
Somatoform disorder	3 (5.1)
Total	58 (100)

Regarding psychiatric co morbidities present in the study population 58 (65.9%) of the study population had psychiatric disorder in some form. Of these 58 (65.9%) patients majority (44.9%) were having panic disorders followed by depressive disorders (36.2%).(Table3)

Analysing the relevant socio-demographic variables which may be associated with the presence of psychiatric disorders in the patients of non cardiac chest pain, in the present study we found that presence of psychiatric disorders were significantly more in married people (p= 0.011), nuclear family (p =0.002), rural areas (p=0.001) , lower socioeconomic status(p=0.014). No significant association between presence of psychiatric disorder and religion, sex, educational status or occupation was found. (Table 4)

Table 4: Association of presence of psychiatric disorder and different relevant socio-demographic variables (n=88)

Psychiatric disorder	Present, n=58 (65.9)	Absent n=30 (34.1)	Total n=88 (100)	Chi square	P value
Sex					
Male	25 (28.4)	16 (18.2)	41 (46.6)	0.532	0.362
Female	33 (37.5)	14 (15.9)	47 (53.4)		
Religion					
Hindu	37 (42.1)	25 (28.4)	62 (70.5)	3.62	0.57
Muslim	21 (23.8)	5 (5.7)	26 (29.5)		
Marital Status					
Married	46 (52.3)	16 (18.2)	62 (70.5)	6.41	0.011
Unmarried	12 (13.6)	14 (15.9)	26 (29.5)		
Type of family					
Joint	13 (14.7)	18 (20.5)	31 (35.2)	12.82	0.002
Nuclear	45 (51.2)	12 (13.6)	57 (64.8)		
Place of residence					
Rural	45 (51.1)	11 (12.5)	56 (63.6)	14.307	0.001
Urban	13 (14.8)	19 (21.6)	32 (36.4)		

Figers in the paranthesis indicate percentage.

DISCUSSION

In the present study on 88 patients mean age came to be 35.91 years with a standard deviation of 9.82 years (35.91 ±9.82 years) where the maximum (37.5%)were in the age group of 26 -35 years . Similar results were found in the study of Hocaoglu Cicek et al where the mean age and standard deviation of the patients were 36.4±10.6 years [3]. 53.4% of the study population were female in the present study which was different from the findings of Wai Man Wong et al where the proportions of males were more than females[5]. Most (37.5%) of the study population having education in the middle school standard contrary to the finding of Hocaoglu Cicek et al where most of the study population were having educational status in the primary (45.7%)[3] . In this study most (39.77%) of the patients were house wife followed by business (21.59%). In the study by Wong et al most (16%) of the study population were in the occupation of professional type[5]. In the study majority (70.45%) were married. This is similar to the finding of Hocaoglu Cicek et al where 74.3% of the population were married[3].

It was found in the present study that majority (63.6%)of the study population were from rural area. In the present study majority were Hindu (75%) and belonged to nuclear (64.8%) family. In the study most of the patients (43.18%) were in the lower middle class followed by upper middle class (34.09%). In the study by Hocaoglu Cicek et al majority (85.7%) were in the middle tier of economic status followed by high (10%) and low economic status (4.3%)[3].

Regarding psychiatric co morbidities present in the study population 58 (65.9%)of the study population had psychiatric disorder in some form . Of these 58 (65.9%) patients majority (44.9%) were having panic disorders followed by depressive disorders (36.2%).This findings were similar to Hocaoglu Cicek et al where majority (47.1%) were having panic disorders followed by depressive disorders (21.4%)[3]. KY Ho et al found depression was more in the patients with Non cardiac chest pain followed by panic disorder[6].

Analysing relevant socio-demographic variables which may be associated with the presence of psychiatric disorders in the patients of non cardiac chest pain in the

present study we found that presence of psychiatric disorder was significantly more in married people (p= 0.011), nuclear family (p=0.002), rural areas (p=0.001) , lower socioeconomic status (p=0.014). No significant association between presence of psychiatric disorder with religion, sex, educational status and occupation was found. No relevant study for discussion was found regarding this part.

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