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Original Research Article

Identification of patients with psychiatric disorders in a surgical unit: a prospective study of risk factors

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ABSTRACT

Background: Many a times, surgical patients suffer from both physical diseases and mental disorders. Psychiatric comorbidity has been reported to be very high (8-53%) in primary health care units in developing countries including India.
Methods: This study was conducted among four hundred in-patients in the Department of General Surgery at Armed Forces Medical College, Pune from May 2015 to April 2016. Patients aged 18 and above were included. Patients who were too ill to participate and who did not consent were excluded. The presence or absence of psychiatric illness was assessed using the general health questionnaire (GHQ) 28 questionnaire.
Results: The mean age of participants with psychiatric co-morbidities as diagnosed with GHQ 28 was 46.79±12.73 years. The prevalence of psychiatric co-morbidities was more amongst females (76.35%) when compared to males (63.09%) with a statistical significance (95% CI: 2.08-23.61; $p<0.05$). The prevalence of psychiatric co-morbidities was more amongst participants living in a nuclear family (89.87%) than in a joint family (36.19%) (95% CI: 40.05-65.24; $p<0.001$). 74.62 % of the participants with psychiatric comorbidities had medical comorbidities as well.
Conclusions: There was high prevalence of psychiatric co-morbidities in the participants of this study. We found that more than 2/3rd patients had psychiatric co-morbidity according to GHQ-28 total score, of which most common was found to be somatoform disorders, followed by mixed anxiety and depressive disorders.

Keywords: Surgical patients, Psychiatric co-morbidity, GHQ 28, Consultation liaison psychiatry

INTRODUCTION

Many a times, surgical patients suffer from both physical diseases and mental disorders. Psychiatric comorbidity has been reported to be very high (8-53%) in primary health care units in developing countries including India.[1,2] The rate of psychiatric co-morbidity in hospitalized physically ill patients at a tertiary care unit is also very high, i.e., 5.0-50.0% and 52.5%.[1] Surgeons spend a considerable amount of time treating patients who present with either psychiatric disorders like depression and anxiety or with physical manifestations of underlying emotional disturbances. Somatoform disorders, apart from posing management problems, also cause significant functional impairment and overall disability for the patient.[1] Early and appropriate recognition of such emotional distress would benefit both the individual and the health care service.[1]

There is convincing evidence that psychological factors have a major impact on both patient outcome and cost of surgical services, moreover, this has generated profound interest in consultation-liaison (C-L) psychiatry.[6,7] The present work has been carried out with the objective to assess the psychiatric comorbidities in patients admitted

in the surgical ward. We also aimed to determine the scope of C-L psychiatry in a tertiary teaching hospital.

METHODS

This study was conducted among four hundred in-patients in the Department of General Surgery at Armed Forces Medical College, Pune from May 2015 to April 2016. The sample size selected was arbitrary. Consecutive patients were selected for participation. The institutional ethics committee approved the study.

Inclusion and exclusion criteria

Patients aged 18 and above were included. They were given accurate and detailed information regarding the purpose of the study. The other inclusion criteria were patients who could read and write in English, willing to give informed consent and agree to comply with the study procedures. The participants were also informed that that the information gathered would be considered as confidential. Patients who were too ill to participate and who did not consent were excluded and replaced by the next patient. Other exclusion criteria were diagnoses of known psychiatric illness and history or current use of psychiatric medications.

Data collection

The sociodemographic variables were captured in a specially designed proforma. The presence or absence of psychiatric illness was assessed using the general health questionnaire (GHQ) 28 questionnaire.[6,7] The GHQ-28 is a self-report screening instrument designed for detection and assessment of individuals with an increased likelihood of current psychiatric disorder. The questionnaire incorporates four subscales including somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression. In the GHQ-28, the respondent is asked to compare his recent psychological state with his usual state. GHQ 28 was applied where higher score indicates poorer psychological well-being of the patient. Any score exceeding threshold value of 4 is classed as achieving "Psychiatric Caseness". The GHQ is not designed to detect symptoms that occur with specific psychiatric disorders but rather provides a measure of overall psychological health or wellness. To assess this, the GHQ focuses on two major classes of phenomena as inability to continue to carry out normal "healthy" functions and symptoms of a distressing nature. These subscales do not necessarily correspond to psychiatric diagnoses and nor are they independent of each other. There are several versions of the GHQ and is a widely used measure of psychological health. GHQ has been translated into 38 languages and used in diverse cultural groups. It has both content validity and construct validity.[1,2]

Statistical analysis

The data was analyzed using the Medcalc® software. Descriptive statistics such as frequency and percentage for categorical variables and mean±standard deviation for continuous variables were used. The statistical significance was fixed at 5% level ($p<0.05$) at 95 % confidence interval.

RESULTS

Four hundred patients met all eligibility criteria for inclusion the study. The mean age of participants with psychiatric co-morbidities as diagnosed with GHQ 28 was 46.79±12.73 years and without psychiatric co-morbidities was 41.25±10.92. The difference between the means of these two groups was statistically significant (95% CI: -8.10 to -2.97; $p<0.001$) as seen in Table 1. The prevalence of psychiatric co-morbidities was more amongst females (76.35%) when compared to males (63.09%) with a statistical significance (95% CI: 2.08-23.61; $p<0.05$) between the genders. Amongst the participants with psychiatric co-morbidities, 74.20% married and 45.34 % were unmarried with a statistical differences between the two groups (95% CI: 12.40-44.25; $p<0.001$). The prevalence of psychiatric co-morbidities was more amongst participants living in a nuclear family (89.87%) than in a joint family (36.19%) (95% CI: 40.05-65.24; $p<0.001$). In this study, it was observed that 74.62% of the participants with psychiatric comorbidities had medical comorbidities as well, whereas 55.14 % of the participants with psychiatric comorbidities had no medical comorbidities (95% CI: 6.93-32.01; $p<0.001$).

Table 1: Distribution of demographic variables.

	Present	**Absent**	**95% CI**	**P value**
Age in yrs. (mean±SD)	46.79±12.73 (272)	41.25±10.92 (128)	-8.10 to -2.97	<0.001
Gender	**Male (%)**	**Female (%)**		
Present	159 (63.09)	113 (76.35)	2.08-23.61	<0.05
Absent	93 (36.91)	35 (23.65)	-5.34-28.23	NS
Marital status	**Unmarried (%)**	**Married (%)**		
Present	39 (45.34)	233 (74.20)	12.40-44.25	<0.001
Absent	47 (54.66)	81 (25.80)	11.34-44.55	<0.001
Family	**Nuclear (%)**	**Joint (%)**		
Present	213 (89.87)	59 (36.19)	40.05-65.24	<0.001
Absent	24 (10.13)	104 (63.81)	33.30-64.75	<0.001

Continued.

Medical comorbidities	Present (%)	Absent (%)		
Present	197 (74.62)	75 (55.14)	6.93-32.01	<0.001
Absent	67 (25.38)	61 (44.86)	2.96-34.74	<0.05

DISCUSSION

The objective of this study was to assess prevalence of psychiatric co-morbidities in surgical in-patients admitted in our hospital. There was high prevalence of psychiatric co-morbidities in the participants of this study. We found that more than 2/3rd patients had psychiatric co-morbidity according to GHQ-28 total score, of which most common was found to be somatoform disorders, followed by mixed anxiety and depressive disorders.

Liberzon et al found an incidence of postsurgical psychiatric comorbidity as high as 32% for patients after vascular operations, whereas Rincon et al demonstrated a 29% incidence of psychiatric comorbidity in a mixed population of medical and surgical ICU admissions.[3,9]

Earlier studies that have tried to identify the factors leading to psychiatric co-morbidities among patients have pointed out non-compliance and disturbed behavior as an important finding.[3] Psychological factors such as stressful life events, anxiety and depression might also lead to compromised functioning of the immune system in these individuals which lead to non-compliance and somatic complaints as suggested by the results of previous psychoneuro-immunological studies.[3]

It was also observed that psychiatric consultations in general hospitals can reduce treatment expenses, mortality, morbidity, and length of hospital stay in a study done as early as in 1971 which still holds good for the current era as well. With the abovementioned facts and with the search for "more appropriate management," liaison psychiatry has emerged as the need of the hour to restore the holistic therapeutic approach.

We have been able to show that such patients can be identified and engaged in treatment, provided there exists a psychiatry consultation service. This should provide a useful C-L psychiatry model for further innovations and service developments in surgical practice as well along with other branches of medicine.

Limitations

This was a cross sectional study done at a single center which cannot be generalized to the community. Analytical studies involving multiple centers are required to strengthen the results. There is no control group for comparison with the study population and no formal sample size calculation was done.

Strengths

The strengths of this study are that we used validated questionnaires. Moreover, all the study participants were literate and able to read and write English.

CONCLUSION

In this study, majority of the surgical in-patients had psychiatric comorbidities. This would warrant surgeons and patients to be aware of the adverse impact of this on the quality of life and recovery from illness. Therefore, surgeons should consider routine screening for psychiatric comorbidities to improve patient outcomes. Psychological therapy and/or pharmacological treatment should be offered when necessary and a full time liaison psychiatry needs to be incorporated in routine hospital care.

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