

Assessment of psychological status of preoperative patients undergoing surgery at a Tertiary Hospital

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Abstract

Introduction: Surgery is a stressful experience for patients. Distress prior to surgery complicates post operative clinical course of the patient and may influence ultimate surgical outcome in an adverse manner.

Objective: Psychological assessment of 100 patients who were admitted for undergoing surgery at a Tertiary Hospital was carried out to determine the levels of preoperative anxiety and depression.

Material Methods: Psychometric assessment was done with clinical interview and psychiatric tool HADS.

Result: Results were analysed for Anxiety and Depression levels amongst the patients. Scope of study was widened to determine modifiable factors for the patients’ psychological status. Twenty seven percent patients had borderline or definite abnormal scores. Seventeen percent had abnormal scores in Anxiety

subscale construct, while 10% had these in Depression subscale.

Conclusion: The study showed that preoperative patients may have anxiety or depression due to their underlying concerns. This has a bearing on ultimate outcome of his surgical condition.

Keywords: Anxiety, Depression, Preoperative, Hospital Anxiety and Depression Scale (HADS)

Introduction

Past few decades have seen an enormous increase in the number of patients undergoing curative and palliative surgical procedures.¹ Despite medical advances and increased safety concerns, surgery remains a threatening experience for patients with multiple stressful components like concerns about one’s physical condition, admission to hospital, anticipation of painful procedure, worries about outcome of the procedure and separation from the family. It is not surprising that even

operations that physicians consider minor, can provoke strong emotional reaction in patients. (Johnston 1988)². Patients who are scheduled to undergo surgery are usually plagued by a lower sense of well-being, not only physically but also mentally, as compared to the general population. This is even more true in patients undergoing extensive resections or amputations.³⁻⁵

The weight of evidence suggests that greater distress or anxiety prior to surgery is associated with a slower and more complicated post operative recovery. (Johnston Wallace 1990, Mathew and Ridgeway 1981). Recent work on psychoneuroimmunology (PNI) has provided evidence that stress delays wound recovery. (Kiecolt Glaser et al 1995, Marucha et al 1998, Padgett et al 1998).²

Objectives

1. To determine the levels of preoperative anxiety and depression (Psychological status) in non-psychiatric patients prior to surgery.
2. To determine any modifiable adverse psychological factor

Material and Methods

This study was conducted prospectively during a 12-month period from April 2017 to March 2018 at a Tertiary Hospital in India. In the study, 100 patients scheduled to undergo elective operation for general surgical condition were enrolled. Patients' consent was obtained for participating in this study. This was followed by collection of demographic data and other data concerning patient (to define the surgical characteristics of the patients i.e surgical diagnosis, past surgery, presence of co-morbid conditions) Patients were also asked about their distressing physical symptoms e.g presence of pain. They were subjected to an interview 24 hours before surgery in the form of a questionnaire to

measure their mental distress using criteria given in HADS.

Questionnaire was administered by a single clinician (after relieving patient's distressing physical symptoms e.g. pain relief).

Since participants belonged to different regions of the country, language barrier was there so assistance was taken from interpreter who could make patient understand interviewer's question and likewise explain his response to the examiner. After their response, patients were further requested to bring out their underlying concerns.

The HADS is a 14-item self-administered questionnaire designed by Zigmond and Snaith (1983)⁶

Questionnaire is composed of 2 subscales of 7 questions each, one to assess anxiety and the other to estimate depression; (related mainly to anhedonia, which is the reduced capability or possibly the complete inability to enjoy the things or experience pleasure, particularly concerning the activities that an individual previously enjoyed. Activities may include exercise, hobbies, sexual activities or social interactions).⁶⁻⁸

Each item has four responses with assigned values ranging from 0 to 3, in either ascending or descending order. The responses to all the questions pertaining to each mood were then summated (results ranged from 0 to 21 for each mood). The results were then categorised based on established groups: normal (scores from 0 to 7), Borderline abnormal (scores from 8 to 10) and definite abnormal (scores from 11 to 21). This questionnaire has been validated in various populations as a simple tool for assessment of mood.⁹⁻¹³

Inclusion criteria

Patients between 18 to 60 years of age in need of surgery and found fit for the same during pre operative evaluation

Exclusion criteria

- Patients <18 years and >60 years of age.
- Those who refused to participate in the study. Patient’s consent was obtained in all the cases.
- Patients with a diagnosed mental disorder. (Obsessional Neurosis, Generalized anxiety disorder, Depression, Schizophrenia and any type of phobia as per ICD).
- Those patients with evident cognitive deficit or language disorders that could impede effective communication.
- Those undergoing surgery for malignant condition
- Those undergoing emergency surgery

Statistical Analysis

Descriptive statistics like percentages were used to interpret the data. Statistical analysis was done with the help of Microsoft Office 2007

Observations

Table 1: Age and Sex Distribution

	Male	Female
18-30 Years	16	12
30-40 Years	16	22
40-50 Years	5	14
50-60 Years	5	10
Total	42	58

Demographic variables

Age; 66% of the patients were between 18-40 years of age and only 34% were older than 40 years.

Sex: Female patients comprised 58% of the study population and male formed 42%

There was no difference in the economic and educational background of the patients. All belonged to same strata of the society.

Table 2: Surgical Diagnosis

Diagnosis	Male	Female
Cholelithiasis	9	35
Hernia	9	4
Varicose Veins (Limbs)	6	0
Appendicitis (Interval surgery)	4	4
Thyroid Disease	0	4
Benign Breast Lesion	0	8
Hydrocele	4	0
Benign Anorectal Conditions	6	1
Submandibular/Parotid Sialadenitis	1	1
Varicocele	2	0
Urolithiasis	1	1

Surgical condition : There was preponderance of cholelithiasis, thyroid conditions and benign breast lesions in females, while male patients had more incidence of hernia, scrotal and anorectal conditions. Only 2% patients had urolithiasis.

Prevalence of anxiety and depressive symptoms according to HADS criteria is presented in Table 3

Table 3: Psychometric Assessment

Subscale Construct	Borderline score (8-10) Total/%	Male No. %	Female No. %	Definite score (11-21) Total/%	Male No. %	Female No. %
Anxiety (HADS-A)	10/10	3/7.1	7/12	7/7	2/4.7	5/8.6
Depression (HADS-D)	6/6	2/4.7	4/6.9	4/4	1/2.4	3/5.1

Table4: Underlying Fear/ Worry

Underlying Fear/ Worry	Male	Female	% of Total(27)
Adverse Surgical outcome	6	12	66.7
Postoperative Pain	8	19	100
Disruption in family life/Lack of familial support	1	12	48.1
Incapacitation	0	5	18.5
Complications	1	5	22.2
Need for further surgery or Recurrence	2	1	11.1
Cancer	0	5	18.5
Conversion to Open surgery	0	2	7.4

Total of 27% patients had borderline/definitely abnormal scores. Of these 17% had abnormal scores in Anxiety subscale construct, while 10% had these in Depression subscale. Those who had abnormal levels on any subscale were further subjected to an interview to bring out their major concerns (Table 4).

Discussion

Mood disorders are prevalent in hospitalized patients¹⁴. Surgeons, in their professional practice, encounter patients with varying personalities and emotional states. Hospital stay before surgery itself affects psychological status. These psychological issues are often not taken into consideration while managing surgical patients. Present study was an observational one and was conducted with the twin aims of assessing

patients’ psychological status before surgery and to find out any modifiable determinants of this status, if the same is detected to be abnormal. Study brought out the distribution of Anxiety and depression alongwith their severity levels in the study population.

In the present study, 66% of the patients were between 18-40 years of age and only 34% were older than 40 years.

Female patients comprised 58% of the study population and male formed 42% of the same.

There was preponderance of cholelithiasis, thyroid and benign breast conditions in females, while male patients had more prevalence of hernia, scrotal and anorectal conditions. Only 2% of the study population had urolithiasis. There was no difference in the economic and educational background of the patients. Twenty seven percent patients had borderline or definite abnormal scores by HADS criteria. Seventeen percent had these scores in Anxiety subscale construct, while 10% manifested these scores in Depression subscale. Further analysis based on gender revealed that these abnormal scores were more prevalent in female patients than males signifying thereby that in the former group there were more psychological concerns.

Twelve percent of female patients manifested borderline abnormal levels on Anxiety subscale while similar levels were observed in only 7.1% of male patients. Definite abnormal levels were observed in 8.6% female patients and in only 4.7% males in anxiety subscale.

Data for Depression reflected similar pattern i.e borderline abnormal levels of 6.9% in females and only 4.7% in male patients. Definite abnormal levels for Depression subscale were seen in 5.1% of female patients and 2.4% of male patients.

Those who had abnormal levels on both subscales were further interrogated to bring out their major concerns. Major worry in all the patients was about their post operative pain. 18.5% patients worried about their incapacitation in postoperative period due to bed-ridden status as well as restricted feeling because of nursing paraphernalia i.e intravenous fluids, drains & catheter etc. 66.7% patients worried about the ultimate outcome of their surgery in terms of symptom relief, post operative wound recovery. 22.2% patients were apprehensive about possible complications as explained to them by surgical team. 11.1% patients had their worries grounded in probable need for any further surgery and recurrence of primary condition e.g Hernia. There were few specific issues in female patients; most important of which was fear of primary condition eventually being proven as malignant one. This was so in 5 of 8 patients who reported with benign breast condition and its origin could be traced to misconceptions prevalent in the society. In 2 female patients there were concerns surrounding Minimally invasive surgery getting converted to open surgery and patient being left with cosmetically unappealing long scars.

48% patients worried about disruption in family life due to lack of familial support. No further detailed analysis was carried out to address the issues beyond hospital confines.

From the facts brought out by this study it can be inferred that certain factors such as fear of complications, post operative difficulties, uncertainty of outcome, probable need for reoperation; societal myths and lack of familial support may play, with varying significance, an important role in the development of mood symptoms among surgical patients. There have been studies which point out that emotional distress and

mood disorders may significantly impact patient's experience of surgery.¹⁵⁻¹⁷ All the studies have emphasized that mood disorders in non-psychiatric patients should be attended with more seriousness.^{18,22}

These mood disorders in their severe form can predispose the admitted patients to higher morbidity and mortality more than three times than general population.^{22,23} This study is not without its limitations. Linguistic barrier was there with some patients. Difficulty was overcome by taking assistance from interpreters. Despite this limitation, credible conclusion could be drawn from the study.

Conclusion

This study showed that preoperative patient had certain psychological status which can negatively impact his management in a significant manner and this is consequent upon genuine underlying concerns which have their genesis in some modifiable factors. All efforts should be made to address patients' concerns, allay his fears, dispel his misconceptions with an overall aim to enhance his surgical experience and optimising surgical outcome. The use of patient screening, counselling, as well as appropriate preoperative treatment of the underlying mood disorder may be valuable in reducing the intensity of these psychological abnormalities. It goes without saying that surgeon's role as a counsellor is invaluable and he should discharge his this obligation. Enlisting the support of a psychiatrist will definitely go a long way towards this aim.

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