

A Study of Anxiety among Hospitalized Patients of Orthopedics Ward of a Tertiary Care Hospital

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ABSTRACT

Background: Hospitalization itself gives rise to anxiety in any patient. And if the patient had fracture of any bone, then the anxiety levels reach at its peak and become troublesome. Anxiety following surgery for fracture during pre operative and post operative period following orthopedic surgery is matter of concern. **Objective:** To study of anxiety among hospitalized patients of orthopedics ward of a tertiary care hospital **Methods:** Present study was hospital based cross sectional study. The study was carried out from November 2012 to December 2013 in the department of Orthopedics at a tertiary care hospital attached to a medical college by the department of Psychiatry. During the study period of the present study, it was possible to study 50 patients with the objective to study of anxiety among hospitalized patients of orthopedics ward of a tertiary care hospital. These 50 patients were selected randomly from hospital record of department of Orthopedics. **Results:** Only 6% of the patients gave history of mental illness in their families. The study sample shows Age, Type of Family, Socio Economic Status, Education, Occupation was also found to be significant factor ($p = 0.026$). The study sample shows Living Situation to be significant factor in the outcome of Depression in patients with p value= 0.024 in HADS. Hospitalization was also found to be a very significant factor ($p = 0.001$). Duration of Hospitalization was also found to be a very significant factor ($p = 0.022$) The study sample shows The study sample shows Type of Treatment to be a very significant factor in the outcome of Depression with p value 0.020 in HADS. **Conclusion:** We conclude that the anxiety among patients undergoing orthopedic surgery was very high and it was associated with factors like Age, Type of Family, Socio Economic Status, Education, Occupation, Living Situation, Hospitalization, Duration of Hospitalization, and Type of Treatment.

Keywords: Anxiety, hospitalization, type of treatment

Hospitalization itself gives rise to anxiety in any patient. And if the patient had fracture of any bone, then the anxiety levels reach at its peak and become troublesome. Anxiety

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following surgery for fracture during pre operative and post operative period following orthopedic surgery is matter of concern. This anxiety can lead to other severe psychiatric morbidities if neglected in some patients. It can also cause problems in terms of social, physical, economic issues. If the person becomes depressed then it can lead to disability or inability to lead a productive life. This can lead to problems in quality of life. It also affects the recovery period of the patient.

Some patients may take hospital environment as negative and unpleasant for them. In some hospitals also the environment may be unpleasant. This adds to the anxiety to the anxiety already present due to illness. This is due to departure from his routine life, social contacts etc. This scenario can lead to anxiety and depression which may go unrecognized by patient himself and his relatives. This will have tremendous impact on the pre operative and post operative medical care. Studies are consistently showing increased prevalence of anxiety and depression not only among patients who are admitted in medical wards but also higher rates among those patients who get admitted for various kinds of surgeries. This was found to be more common among women.

The anxiety and depression is more common among patients with musculoskeletal disorders. Following trauma the occurrence of anxiety and depression doubled in these patients.

As a result the patients with fractures and orthopedic problems are classified as special group due to increased levels of anxiety and depression among them. This can be attributed to some extent to musculoskeletal problems associated among these types of patients. Use of HADS revealed a high occurrence of anxiety and depression among patient with rheumatoid arthritis.

Research after injury related to outcome of both short term and long term nature is becoming increasingly interesting following major trauma. The availability of well equipped trauma centers and prompt care has resulted in better survival of patients. But at the same time these patients are prone to post traumatic stress disorder or anxiety or depression. Hence interventions at this level are important to reduce levels of psychiatric morbidity like anxiety among this group of patients.

Hence present study was carried out with the objective of study of anxiety among hospitalized patients of orthopedics ward of a tertiary care hospital

METHODOLOGY

Present study was hospital based cross sectional study. The study was carried out from November 2012 to December 2013 in the department of Orthopedics at a tertiary care hospital attached to a medical college by the department of Psychiatry. During the study period of the present study, it was possible to study 50 patients with the objective to study of anxiety among hospitalized patients of orthopedics ward of a tertiary care hospital. These 50 patients were selected randomly from hospital record of department of Orthopedics. After

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estimating the total number of admissions in the department of orthopedics, and after actually finding out the total number of major surgeries taking place there, it was found that there were 400 such major orthopedic surgeries taking place from the past records data. As soon as the patient was posted for elective major orthopedic surgery, he was contacted by us and the patient was checked whether he fits into the inclusion and exclusion criteria of the present study. If he fitted into the inclusion criteria, the patient was included in the present study. If the patient did not fit into the inclusion criteria, he was not included in the present study.

Thus we took every 5th patient who was posted for elective major surgery by the department of orthopedics. After selecting the first patient randomly on a random day then every 5th patient was selected. It was found that out of 400 patients in the study year, 270 were eligible and fitted into the inclusion criteria of the present study. Taking every 5th patient, 54 patients were selected out of these 270 eligible patients. But at the time of analysis, it was found that the data of four patients was missing. Therefore it was possible to include 50 patients in the final analysis for the present study.

After selection of the patient, a good rapport was developed with the patient. The patient was enquired into detailed history. The patients socio demographic details like age, sex, place of residence, married or not, what is the type of family, socio economic status, literacy, doing job or not, are asked and recorded in the pre designed, pre tested, semi structured proforma in the present study.

Apart from socio-demographic details, family history of mental illness was enquired. Each patients anxiety levels was assess using hospital anxiety and depression scale (HADS). This scale was devised by Snaith and Zigmond. The objective of the scale was to assess the level of anxiety and depression among the patients. This scale helps physicians to identify patients with anxiety and depression. This is only a screening tool. If a person is found to be positive, he must be sent for psychiatric evaluation.

The data was recorded and analyzed using proportions. Chi square test was used to study association between risk factors studied in the present study and anxiety among patients who were posted for elective surgery in the department of orthopedics.

RESULTS

Table 1: Distribution of study subjects as per family history of mental illness

| Family history of mental illness | Number | Percentage |
|----------------------------------|--------|------------|
| Present | 03 | 06 |
| Absent | 47 | 94 |

Table 1 shows distribution of study subjects as per family history of mental illness. The study sample contained 96% patients with no family history of mental illness. Only 6% of the patients gave history of mental illness in their families.

Table 2: Association of various factors with anxiety

| Variable | Chi square | P value |
|----------------------------------|------------|----------|
| Age | 13.88 | 0.035** |
| Sex | 0.205 | 0.903 |
| Location | 4.371 | 0.112 |
| Marital status | 8.995 | 0.041* |
| Religion | 6.519 | 0.038* |
| Type of family | 6.561 | 0.038* |
| Socio economic status | 13.55 | 0.009** |
| Education | 20.335 | 0.026** |
| Occupation | 17.885 | 0.057* |
| Living situation | 14.530 | 0.024** |
| Monthly family income | 5.635 | 0.465 |
| Social support | 5.568 | 0.234 |
| Substance use | 8.495 | 0.204 |
| Family history of mental illness | 1.116 | 0.572 |
| Hospitalization | 15.881 | 0.001*** |
| Duration of hospitalization | 14.839 | 0.022** |
| Site of fracture | 6.608 | 0.158 |
| Side of fracture | 1.636 | 0.802 |
| Type of fracture | 3.070 | 0.540 |
| Treatment | 11.068 | 0.020** |

Table 2 shows association of various factors with anxiety. The study sample shows Age in relation to HADS as a significant factor in the outcome of Depression, with p value 0.035. Type of Family was also found to be a significant factor in the outcome of depression in patients with p value 0.038 in HADS. The study sample shows Socio Economic Status to be a very significant factor in the outcome of Depression with p value 0.009 in HADS. Education was also found to be significant factor in the outcome of Depression in (p = 0.026). Occupation was also found to be significant factor (p = 0.026). The study sample shows Living Situation to be significant factor in the outcome of Depression in patients with p value= 0.024 in HADS. Hospitalization was also found to be a very significant factor (p = 0.001). Duration of Hospitalization was also found to be a very significant factor (p = 0.022) The study sample shows The study sample shows Type of Treatment to be a very significant factor in the outcome of Depression with p value 0.020 in HADS.

DISCUSSION

The study sample contained 96% patients with no family history of mental illness. Only 6% of the patients gave history of mental illness in their families. The study sample shows Age in relation to HADS as a significant factor in the outcome of Depression, with p value 0.035. Type of Family was also found to be a significant factor in the outcome of depression in patients with p value 0.038 in HADS. The study sample shows Socio Economic Status to be a very significant factor in the outcome of Depression with p value 0.009 in HADS. Education was also found to be significant factor in the outcome of Depression in (p = 0.026). Occupation was also found to be significant factor (p = 0.026). The study sample shows

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Living Situation to be significant factor in the outcome of Depression in patients with p value = 0.024 in HADS. Hospitalization was also found to be a very significant factor ($p = 0.001$). Duration of Hospitalization was also found to be a very significant factor ($p = 0.022$). The study sample shows Type of Treatment to be a very significant factor in the outcome of Depression with p value 0.020 in HADS.

Hung M et al tried to assess the anxiety and depression among patients admitted in the orthopedic ward. They observed that the factors related with anxiety and depression were more correlated with each other ($r = 0.7$). Thus the authors concluded that two factor structures fitted nicely with HADS among the patients admitted in the orthopedic ward. But they emphasized the need for further studies.

Holbrook TL et al followed the patients who recovered after trauma and studied the outcome of psychiatric morbidity among them. In their study, majority was males and maximum were white. One third of the patients were Hispanic. They found that 18% were black. Proportion of married was lesser in their study. 85% of the patients in their study suffered from blunt injuries. On an average the hospital stay of the patients was 7-8 days. The authors assessed the functions among the patients using QWB scores. They found that at the time of discharge there was a significant limitation of the functional ability. The score was found to increase at the end of six months of follow up. But when the authors used the ADL scale, they found that at discharge there was moderate limitation of the functional ability and it reduced at six month follow up. The authors observed that depression after injury, severe type of injury and prolonged hospital stay were related with these high scale scores.

Cremeans-Smith JK et al studied the degree of post traumatic stress among patients admitted in the orthopedic ward. They tried to study the medical records and wanted to study the association between this information and the outcome whether this information from medical records was useful to predict outcome among patients who underwent repair of fracture of hip and total replacement of the knee. They observed that those patients who had more stress had poor outcome compared to patients who had less stress. They suggested that use of medical records can be made to predict outcome.

Nota SP et al studied the occurrence of depression and disability among patients who underwent orthopedic trauma. They found that there was some relation between the depressive symptoms and the degree of disability. Catastrophic thinking was also found to be moderately associated. Disability among these patients after a gap 5-8 months was associated with operation, pain catastrophic scale, other pain conditions and additional operation. Thus the authors suggested that psychological aspect should be neglected among patients who have orthopedic trauma and musculoskeletal injury.

Ponsford J et al studied factors and its association with outcome among patients who had orthopedic trauma. They found that increasing age, post traumatic stress disorder, pain, bad

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recovery even after 1-2 years, and depression were significant predictors of the outcome. But type of injury and severity of the injury were not found to be predictors of the outcome.

Soberg HL et al studied the symptoms of post traumatic stress and assessed the mental health after two years among patients who had multiple traumas. They concluded that being female, young age group, not able to cope up with the trauma, previous mental health history were the factors which predicted the variation in the PTSS score after two years among patients who had multiple trauma.

Caumo W et al studied risk factors for anxiety among adult patients before surgery. They found that anxiety before surgery was two times more among patients who had previous history of cancer than those who had not such history. They also found that anxiety before surgery was seven times more among patients who had history of smoking than those who had not such history. They also found that anxiety before surgery was six times more among patients who had history of psychiatric disorders than those who had not such history. They also found that anxiety before surgery was two times more among patients who had history of negative future perception than those who had not such history of psychiatric disorders. They also found that anxiety before surgery was three times more among patients who had history of moderate to intense depressive symptoms than those who had not such history. They also found that anxiety before surgery was three times more among patients who had history of high trait-anxiety than those who had not such history. They also found that anxiety before surgery was two times more among patients who had history of moderate to intense pain than those who had not such history. They also found that anxiety before surgery was 1.5 times more among patients who had history of medium surgery than those who had not such history. They also found that anxiety before surgery was two times more among female patients than males. They also found that anxiety before surgery was three times more among ASA grade III patients than others. They also found that anxiety before surgery was 1.36 times more among patients who had 12 years of education than others.

Ray C et al in their study could not find any relation between patient being emotional and his adjustment after surgery. The authors stressed that mild to moderate level of anxiety before surgery may be helpful in the adjustment after surgery. They found that pre operative stress was positively associated with post operative stress.

Chaudhury S et al carried out psychiatric evaluation among patients who had fracture of limb. They studied 70 patients of fracture in the either lower or upper limb. They compared them with controls. They found that the patients who had fracture of the lower limb had more prevalence of psychiatric disorder compared to patients who had fracture of the upper limb. The patients with limb fracture were found to be more alcoholic than the controls. At the same time they were also found to have depressive disorders among them. The authors suggested having proper interventions to support the psychological aspects of the patients.

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Chaudhury S et al found that anxiety among patients with fracture of leg was less but the levels of depression were more.

CONCLUSION

We conclude that the anxiety among patients undergoing orthopedic surgery was very high and it was associated with factors like Age, Type of Family, Socio Economic Status, Education, Occupation, Living Situation, Hospitalization, Duration of Hospitalization, and Type of Treatment.

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