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CROSS-SECTIONAL STUDY OF ORTHOPAEDIC TRAUMA PATIENTS ABOUT ASSESSMENT OF ANXIETY AND DEPRESSION IN THESE PATIENTS IN TERTIARY CARE HOSPITAL

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ABSTRACT
Traumatic orthopaedic injuries are common and have clinical, social and psychological manifestations. Injury causes a significant socio-occupational dysfunction and loss of productivity until they recover. The Aim of the study was to estimate proportion of anxiety and depressive symptoms in post-traumatic patients. The study samples were collected from the emergency and OPD of orthopaedic dept of a tertiary care hospital with help of The Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983). Anxiety was more common than depression although both were high. This study also suggests If all post – traumatic patients are evaluated using HADS, their levels of anxiety and depression can be assessed and appropriate intervention in the form medication or psychotherapies.

KEYWORDS: Orthopaedic Trauma, Anxiety, Depression, HADS.

INTRODUCTION
Traumatic orthopaedic injuries are very common and occur in all ages. Pain is constant symptom of the orthopaedic trauma which has a significant psychological effect on patients. Adults who sustain traumatic physical injury can experience a range of mental health problems related to the injury and subsequent changes in physical health and function. However early screening and identification of mental health problems after traumatic physical injury is inconsistent and not routine during the hospital admission process for the physically injured patients. Injury causes a significant socio-occupational dysfunction and loss of productivity until they recover.[1]

Addressing psychological issues earlier in the course may also improve quality of life, additional costs for care especially mental health care costs, lessen burden on support systems, and improve productivity and progression of impairments to disabilities. Many studies which attempted psychological evaluation following trauma have stressed the need for the same to detect morbidity early and plan interventions to improve long term outcomes.[2]

Accurate information regarding the psychopathological consequences of surviving traumatic injury is of great importance for effective health service design and planning. Regrettably, existing studies vary dramatically in reported prevalence rates of psychopathology within this population.[3] The aim of this study was to assess the proportion of psychiatric morbidity (Depression and anxiety) following Traumatic orthopaedic injuries by a longitudinal design by HADS tool.

METHODOLOGY
AIM AND OBJECTIVE
To estimate proportion of anxiety and depressive symptoms in post-traumatic patients presenting to emergency and OPD of Orthopedic Department of Govt Medical college & hospital, Akola, Maharashtra.

Sample Size: All patients of orthopaedic injuries presented to emergency and OPD of orthopaedic dept were enrolled in the study till the defined sample size was achieved. Totally 100 patients were enrolled.

Sampling method
Consecutive sampling method was used with the following Inclusion and exclusion criteria.

Inclusion Criteria
1. Patients having traumatic orthopaedic injury (ies)
2. Patient having age above 18 years
3. Patients willing to participate in study

Exclusion criteria

1. Duration of more than 24 hrs after trauma were excluded.
2. Psychiatric disorder diagnosed before the traumatic incidence
3. Chronic ongoing or Terminal illness
4. Patients those who were comatose, poor Glasgow Coma Scale (GCS) or unable to understand self reporting form (HADS)

Socio-demographic and clinical history information were collected in a semi-structured, pre tested paper based questionnaire. Patients were given HADS self-report scale after clear instructions.

The Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983) is a 14-item measure designed to assess anxiety and depression symptoms in medical patients, with emphasis on reducing the impact of physical illness on the total score. The depression items tend to focus on the anhedonic symptoms of depression. Items are rated on a 4-point severity scale. The HADS produces two scales, one for anxiety (HADS–A) and one for depression (HADS–D), differentiating the two states.[4]

The HADS is a 14-item self-report scale that consists of a depression and an anxiety scale, each with 7 items. The scale was designed to screen for mood disorders in general (non-psychiatric) medical outpatients. Items are rated on a 4-point severity scale. The HADS produces two scales, one for anxiety (HADS–A) and one for depression (HADS–D), differentiating the two states. scale focuses on subjective disturbances of mood rather than physical signs, and aims at distinguishing depression from anxiety. Compared to other instruments scales, it focuses more on emotional aspects of anxiety disturbances, as opposed to somatic and cognitive symptoms. The HADS is comprised of two sub scales, Depression and Anxiety. Each subscale has a score ranging from 0-21. Items are rated on a 4-point Likert type scale ranging from 0 to 3, generating a scale range of 0 to 42 points, with higher scores representing greater symptom severity.[5] The anxiety subscale has 3 items that refer to panic and 4 to generalized anxiety. Scoring of 0-7 indicate normal levels of anxiety and depression; 8-10 indicate borderline abnormal anxiety and depression levels and 11-21 suggest abnormal levels of anxiety and depression**.** For anxiety (HADS-A) this gave a specificity of 0.78 and a sensitivity of 0.9. For depression (HADS-D) this gave a specificity of 0.79 and a sensitivity of 0.83.

Interns and senior residents were involved in the data collection, consent form filling and explanation of HADS to study subjects. Patients were enrolled during the presentation at OPD and Emergency but detailed data collection was conducted after their clinical stabilization.

Hung M et al (2015)[6] has also found application of this scale suitable to assess the ability of two factor structure of HADS in Orthopaedic injury patients.

Sharma A et al (2016)[7] also conducted a similar kind of study in tertiary care hospital. Patient's confidentiality and anonymity were maintained. After data collection the data was entered on to the excel sheet and analysed with suitable statistical test.

RESULTS AND DISCUSSION

In the present study total of 123 patients were approached and 100 consecutive patients who fulfilled inclusion/exclusion criteria were enrolled in study. 72% were males and mean age of the sample was 38.6 years (Age range 18-72 years).

Table. 1: Distribution of study subjects according to mode of injury.

Mode of injury	Road Traffic Accidents (RTA)	Domestic injuries	Occupational injury
Numbers	59	29	12

In the study it was observed that 59% patients sustained injury in road traffic accidents, 29% in domestic circumstances and 12% in occupational circumstances.

Each of the patients was assessed with self reported HADS and following are the scores.

Table. 2: Distribution of patients according to scale.

Score Range	HADS-A	HADS-D
0-7	54	61
8-11	30	26
12-21	17	13

In study the patients was categorised by HADS score in two categories i.e. HADS-A & HADS- D. It was observed that HADS-A has 54 patients and HADS-D has 61 patients in normal range. Under border line category more patients were [HADS-A (30) & HADS-D (26)] found to be in the anxiety group compared to depression. About 17 patients were having high level of anxiety compared to 13 patients in depression group. Interestingly, all patients belonging to depression group were also common to anxiety group. This show that a significant number of patients fall under group having "abnormal levels of anxiety and depression". **O' Donnel et al, 2004, (2)** noted in their assessment of initial prevalence rates that 17% of the participants had moderate to severe levels of anxiety (Score ≥ 19 Beck Anxiety Inventory) and 15% reported moderate to severe levels of depression (Score ≥ 19 on Beck Depression Inventory). Another similar study conducted by **Sharma A. at el (2016)(7)** at tertiary care hospital found that 26% of participants had scores in the range of moderate to severe anxiety and 36% of participants had high depression scores. About 8% of patients had both the scores in moderate to severe range. So both study

concludes the applicability of HADS and could be used as a screening tool to assess depression and anxiety in post-traumatic patients. These patients need to be evaluated by psychiatrist for further assessment and treatment decision.

Table. 3 average score of various sub scale.

Total Score	Anxiety Score	Depression Score
18.1	9.6	8.5

The average score was 18.1, 9.6 and 8.5 for total score for HADS, anxiety and depression respectively (Table 3).

CONCLUSION

The present study was conducted in hospital setting as a longitudinal study which gives a fair indication about the proportion of anxiety and depression just after trauma (with in 24 hrs of incidence). A similar larger study may be conducted with time gap like 7 days, 3 weeks, 6 weeks, 6 months and one year, to assess the effect of time. But this preliminary study suggested that 47 patients for anxiety and 39 patients for depression were having higher score. Ideally these patients should be assessed by psychiatrist and psychiatric help & counselling should be provided for better outcome of the health. Being a small study this cannot be generalised on general population. However this study suggest that these traumatic patients should be supported by psychological support and care also. This study also suggests that if all post – traumatic patients are evaluated using HADS, their levels of anxiety and depression can be assessed and appropriate intervention in the form of medication or psychological support can be provided. By that their long-term outcomes both in terms of mental and physical wellbeing will be ensured.

CONFLICT OF INTEREST

Authors don't have conflict of interest and no extramural funding was received for the study.

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