

ORIGINAL ARTICLE

Evaluation of Anxiety and Experience of patients presented with Maxillofacial Trauma in Nishtar Institute of DentistryTAUSEEF ZAHRA¹, ZEHRA JAWA², TEHZEEB ZAHRA³, ASIF NAZEER⁴, HASSAN RAZA⁵, USMA BATOOL⁶¹Post Graduate Resident Oral & Maxillofacial Surgery, Nishtar Hospital Multan²Post Graduate Resident Oral & Maxillofacial Surgery, Nishtar Hospital Multan³House Officer, Rawalpindi Medical College, Rawalpindi⁴Post Graduate Resident Oral & Maxillofacial Surgery, Nishtar Hospital Multan⁵Director Administration, Allama Iqbal Medical College, Lahore⁶Phd Student, Punjab UniversityCorrespondence to Dr. Tauseef Zahra, Email: dr.tauseefzahra@gmail.com, Cell: 92332-4774330**ABSTRACT****Aim:** To evaluate the anxiety in patients of maxillofacial trauma using HAM-A scale presenting in emergency department and compare it with elective maxillofacial surgery patients**Study design:** Analytical cross sectional study.**Place and duration of study:** Study was conducted from May 2021 to Apr 2022 at Dental unit of Nishtar Institute of Dentistry.**Methodology:** 80 patients who met the inclusion criteria were included. Inclusion criteria was any patient aged between 12-80 years irrespective of gender who got isolated facial trauma, patients with no previous history of psychological disorder. Hamilton anxiety scale was used to make a proforma which was filled by on duty post graduate trainee. p-value of ≤ 0.05 was significant.**Results:** There were 61 males (76.2%) and 19(23.8%) females. Mean age of patients in group A (facial trauma) was 40.5 \pm 15.20 years and in group B (elective surgery) was 50.2 \pm 10.47 years. HAM-A score in group A was 25.15 \pm 9.74 (moderate to severe anxiety) and in group B it was 12.12 \pm 4.44 (mild anxiety) which was statistically significant. (p value 0.00).**Conclusion:** Maxillofacial injuries may pose a heavy impact psychological lives of patients and patients may suffer from anxiety and depression. A multidisciplinary team approach with surgeon and psychiatrist be included to reduce physical damage and psychological impact on patients.**Keywords:** Anxiety, depression, maxillofacial trauma**INTRODUCTION**

Road traffic accident is one of the leading cause of death nowadays and causes death in every 30 seconds on road. Over 1 million people die every year due to road traffic accidents and 25 million are permanently injured or disabled every year in road traffic accidents¹. Face which is the most prominent and exposed part is more prone to injuries and disfigurement. This facial trauma causes physical as well as psychological impact on individuals. According to WHO around 450 million people suffer from mental disorders and about 11% of sufferers are due to all diseases and injuries in the world². Studies have shown that patients with facial trauma are more prone to depression and anxiety disorders within 1 year of trauma due to facial disfigurement³. According to literature about 10-70% of people suffers from sadness and worry after maxillofacial trauma⁴ and about 23% to 41% of patients with maxillofacial trauma suffers from depression and post-traumatic stress disorder (PTSD)⁵. Maxillofacial injuries that have been caused by others are more likely to cause stress disorders than accidental injuries⁶. Studies have shown that PTSD was seen more in facial injuries victims at 3 and 6 months follow up than simple accidents and sports injuries⁷. Such type of psychological disorders puts an individual on more risk of suicide tendencies, decreased treatment compliance and compromised quality of life. If these psychological disorders remains untreated they causes poor social life, job related problems and are more prone to violence, drug abuse and further harm to themselves and others⁸. Stress and anxiety related disorders are often associated with concerns regarding recovery and time required for complete recovery and treatment⁹. It is very important for the treating surgeon that good patient outcome is not only depends on good surgical skills but also treating the stress and anxiety at the same time¹⁰.

Although due to a lot of stress by many researches trauma surgeons now insists on treatment of physical and psychological problems at the same time but in developing countries like Pakistan only few individuals talks about such issues. Also there are very limited local studies available which can hardly change the mindset of treating surgeons.

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We have conducted this study to see the social and psychological impact of maxillofacial trauma on healthy individual who presented to trauma centre of Nishtar institute of dentistry Multan.

METHODOLOGY

This Study was conducted from May 2021 to Apr 2022 at Dental Unit of Nishtar Institute of dentistry Multan. This study was commenced after approval from Institutional Ethical Review Board. A sample size of 80 was calculated by taking frequency of psychosocial impact to be 8%, 5% margin of error and 95% confidence level¹. Inclusion criteria was any patient aged between 12-80 years irrespective of gender who got isolated facial trauma, patients with no previous history of anxiety or depression or any other psychological disorder. Exclusion criteria was patients with polytrauma, patients with known anxiety or depression, patients taking any antipsychotics, drug abusers and addicts. Non-probability consecutive sampling technique was used to include the patients. An informed consent was obtained from patients or their relatives who were included in the study. Hamilton anxiety scale was used to make a proforma which was filled by on duty post graduate trainee. Each item is scored on a scale of 0 (not present) to 4 (severe), with a total score range of 0-56, where <17 indicates mild severity, 18-24 mild to moderate severity and 25-30 is moderate to severe. 40 patients of facial trauma were placed in group A and 40 patients of elective facial surgery were placed in group B. HAM-A score was calculated in both groups and compared.

Data was entered and analyzed using SPSS version 23.0. Mean \pm SD or median was calculated for all the quantitative variables like age, etc. The categorical variables such as gender and socioeconomic status were calculated as frequency with percentages. Independent sample T test was applied to see the association of HAM-A score with cause of facial injury and p value was calculated. P-value ≤ 0.05 was considered significant.

RESULTS

There were 61 males (76.2%) and 19(23.8%) females. Mean age of patients in group A(facial trauma) was 40.5 \pm 15.20 years and in group B (elective surgery) was 50.2 \pm 10.47 years. When group wise age distribution was seen it was observed that 27 patients (33.8%) were present in 12-40 years range, 46 patients (57.5%) were present in 41-60 years range and 7 patients (8.8%) were

present in age range of 61-80 years. 74 patients (92.5%) belongs to low socioeconomic status and 6 patients (7.5%) belongs to middle class.

Table 1: Demographics of patients

Variable	Group A	Group B
Age (YEARS)	40.5 ± 15.20	50.2 ± 10.47
Gender	Males	28 (70%)
	Females	12 (30%)
Group wise age distribution	18 – 40	8 (20%)
	41 – 60	26 (65%)
	61 – 80	6 (15%)
Socioeconomic status	Middle class	1 (7.5%)
	Poor class	39 (92.5%)

HAM-A score was calculated in both groups and compared. HAM-A score in group A was 25.15 ± 9.74 (moderate to severe anxiety) and in group B it was 12.12 ± 4.44 (mild anxiety) which was statistically significant (p value 0.00).

Table II: Comparison of both groups

Variable	Study Group		P value
	Group A	Group B	
HAM-A score	25.15 ± 9.74	12.12 ± 4.44	0.00

DISCUSSION

Maxillofacial trauma affects the physical and psychological wellbeing of the patients in unexpected ways. A significant number of patients of facial trauma displayed psychological disorders in trauma as well as in follow up visits in OPD. Depression, anxiety related to facial appearance and PTSD were among the most common disorders¹¹. Almost 39% patients of facial trauma met criteria of psychiatric illness when presented in trauma which shows a significant association which decreases to 27% in follow up visits as reported in literature¹¹. Disfigurement associated with facial injuries mainly affects the individuals self-esteem and personality and leads to psychological disorders¹². Injuries to eyes, ears and dental region place a patient more prone to stress and anxiety and hinders normal recovery of patients¹³.

A study by Lento J et al conducted in Los Angeles showed that patients with maxillofacial trauma had psychologic distress like anxiety, depression, phobic anxiety and hostility for upto 12 months after trauma when compared with patients with elective surgery group. Also patients with orofacial trauma require more social support with mental health issues in post trauma years¹⁴. A study by sheraz F et al showed that 43% of patients of trauma group showed anxiety and 39% patients showed depression after maxillofacial trauma and 40% patients required psychological support after trauma which was significantly higher than patients who were undergoing elective head and neck surgery¹⁵. A study by Tebble NJ et al showed that anxiety score and self-consciousness was significantly higher in facial trauma group as compared to general population. They also stated that size of scar puts direct impact on psychological health of individuals rather extent of facial injury¹⁶. A meta-analysis by Gibson JA et al showed that anxiety was found in 26.4% post facial trauma patients and depression was found in 21.4% facial trauma patients. They also have found that female gender, past psychiatry history are associated with more psychological disorders in post trauma period¹⁷. A study by Pokharel PK et al showed in their study that 41.3% of included patients in their study suffered from depression in post facial trauma period which reduced with time in follow up visits¹⁸. A study by Wilson N et al showed that 23% of post maxillofacial trauma patients suffered from post trauma stress disorder which gradually reduced in followup visits¹¹. A study by Islam S et al don in UK and Australia showed that post facial trauma depression was found in 20% UK and 11.5% of Australian included patients while anxiety was present in 20% UK and 15% of patients included from Australia¹⁹. A study by Howson K et al stated that 17% patients had anxiety and 6% patients had depression in post maxillofacial trauma period⁵.

This study has the limitation that we have used only HAM-A scale to measure stress disorders while if it is done with using two or more scales like hospital anxiety and stress scale (HADS) and

depression anxiety stress scale (DASS) this will add more accurate calculation of stress disorders.

CONCLUSION

Most people recover from facial trauma without any psychological disorder but very few patients may develop psychological difficulties that should be addressed in daily clinical practice. Such injuries may pose a heavy impact on normal lives of patients. A multidisciplinary team approach with surgeon and psychiatrist be included to reduce physical damage and psychological impact on patients. Routine psychological screening at each emergency and later outpatient contact by qualified psychiatrist be started which will prevent chronic mental illness and the associated social, economic, and vocational issues.

Conflict of Interest: No conflict of interest

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REFERENCES

- Sureshkumar L, Patil P, Iyer Y. Effect on quality of life and psychosocial issues of patients with maxillofacial fractures in rural setting. *Indian J Dent Sci.* 2021;13(3):187
- Persaud A, Day G, Gupta S, Ventriglio A, Ruiz R, Chumakov E, Desai G, Castaldelli-Maia J, Torales J, Juan Tolentino E, Bhui K. Geopolitical factors and mental health I. *Int J Soc Psychiatry.* 2018;64(8):778-85.
- Sahni V. Psychological impact of facial trauma. *Craniofacial Trauma Reconstr.* 2018;11(1):015-20.
- Braimah RO, Ukpong DI, Ndukwe KC, Akinyoola AL. Comparative study of anxiety and depression following maxillofacial and orthopedic injuries. Study from a Nigerian University Teaching Hospital. *Clin. Exp. Dent. Res.* 2017;3(6):215-9.
- Howson K, Yeung E, Rayner L, Fan K. Real-time screening tool for identifying post-traumatic stress disorder in facial trauma patients in a UK maxillofacial trauma clinic. *Int J Oral Maxillofac Surg.* 2021;50(11):1464-70.
- Salentijn EG, Peerdeman SM, Boffano P, van den Bergh B, Forouzanfar T. A ten-year analysis of the traumatic maxillofacial and brain injury patient in Amsterdam: incidence and aetiology. *J Craniomaxillofac Surg.* 2014;42(6):705-10.
- Qi W, Ratanatharathorn A, Gevonden M, Bryant R, Delahanty D, Matsuoka Y, Olff M, deRoos-Cassini T, Schnyder U, Seedat S, Laska E. Application of data pooling to longitudinal studies of early post-traumatic stress disorder (PTSD): the International Consortium to Predict PTSD (ICPP) project. *Eur. J. Psychotraumatol.* 2018;9(1):1476442.
- Sabri B, Greene MC, Du S, Solomon SS, Srikrishnan AK, Mehta SH, Lucas GM. Exploring multilevel determinants of co-occurring violence, HIV, mental health and substance use problems. *J Ethn Cult Divers Soc Work.* 2021;22:1-3.
- Reardon CL, Hainline B, Aron CM, Baron D, Baum AL, Bindra A, Budgett R, Campriani N, Castaldelli-Maia JM, Currie A, Derevensky JL. Mental health in elite athletes: International Olympic Committee consensus statement (2019). *Br J Sports Med.* 2019 ;53(11):667-99.
- Nwashindi A, Dim EM, Saheeb BD. Anxiety and depression among adult patients with facial injury in Nigerian Teaching Hospital. *Int J Med Biomed Res* 2014;3:5.
- Wilson N, Heke S, Holmes S, Dain V, Priebe S, Bridle C, Aylen I, Boyd C, Ramjaun G, Kanzaria A. Prevalence and predictive factors of psychological morbidity following facial injury: a prospective study of patients attending a maxillofacial outpatient clinic within a major UK city. *Dialogues Clin. Neurosci.* 2022.
- Elhawary H, Salimi A, Gilardino MS. Ethics of facial transplantation: the effect of psychological trauma associated with facial disfigurement on risk acceptance and decision making. *Ann. Surg.* 2022 ;275(5):1013-7.
- Brook I. Late side effects of radiation treatment for head and neck cancer. *Radiat. Oncol. J.* 2020 Jun;38(2):84.
- Lento J, Glynn S, Shetty V, Asarnow J, Wang J, Belin TR. Psychologic functioning and needs of indigent patients with facial injury: a prospective controlled study. *J. Oral Maxillofac. Surg.* 2004;62(8):925-32.
- Shiraz F, Rahtz E, Bhui K, Hutchison I, Korszun A. Quality of life, psychological wellbeing and treatment needs of trauma and head and neck cancer patients. *Br J Oral Maxillofac Surg.* 2014;52(6):513-7.
- Tebble NJ, Adams R, Thomas DW, Price P. Anxiety and self-consciousness in patients with facial lacerations one week and six months later. *Br J Oral Maxillofac Surg.* 2006 ;44(6):520-5.
- Gibson JA, Ackling E, Bisson JI, Dobbs TD, Whitaker IS. The association of affective disorders and facial scarring: Systematic review and meta-analysis. *J. Affect. Disord.* 2018;239:1-0.
- Pokharel PK, Baliga M, Amirtraj A, Mehar H. Assessing psychological consequences following maxillofacial trauma using DASS scale—our experience. *Asian J. Med. Sci.* 2016;7(2):85-9.
- Islam S, Ahmed M, Walton GM, Dinan TG, Hoffman GR. The prevalence of psychological distress in a sample of facial trauma victims. A comparative cross-sectional study between UK and Australia. *J Craniomaxillofac Surg.* 2012.