



MORBID PSYCHIATRIC DISORDER IN PATIENTS OF AMPUTATION-A HOSPITAL BASED STUDY

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Article Received on 30/09/2017

Article Revised on 20/10/2017

Article Accepted on 10/11/2017

ABSTRACT

Background: Amputation is the removal of one or more parts of the body and can be as a result of unprecedented havoc or natural disasters; like accidents, earthquakes of major intensity, terrorism and war, or carried out due to medical reasons with the motive to improve health outcomes and quality of life of patients. In cancer patients, it is performed as a lifesaving procedure to protect them from further malignancy of the body part or to other parts of the body. Irrespective of the cause of amputation, it brings a significant and drastic change in a person's life, and one goes from a stage of shock, to acknowledgement, and finally adjustment. As compared to the upper limb amputees, the lower limb amputees experience more changes in their life after the amputation. A cross-sectional study reported vehicle accidents as the major cause of amputation. Individuals suffering from traumatic limb loss at any age are likely to suffer subsequent difficulties with their body image, but these relationships are more striking in the younger age groups who have experienced traumatic injuries. The psychological reactions to amputations are clearly diverse and range from severe disability at one extremes; determined and effective resumption of a full and active life at other end. In view of less number of studies in this field from Kashmir, increase number of patients referred to our hospital which is a tertiary care hospital and ongoing conflict which is there from past 27 years, we intended to take up this study to find out psychiatric co morbidities in these patients. **Methods:** Hundred successive patients presents with history of Amputation who fulfilled inclusion and exclusion criteria were taken up for the study and administered the Mini International Neuropsychiatric Interview (MINI) scale for evaluation of psychiatric co-morbidity. Each patient was informed about the purpose of interview; his/her consent was obtained and strict confidentiality was ensured. General description, demographic data and psychiatric history were recorded using semi structured Proforma and MINI. **Results:** Out of hundred cases of amputation, 61% of the patients were in the age group of 36-55 followed by 18% in age group of 16-35 years. This could suggest that amputation affects middle age group more. There were predominantly more males (67%) than females (33%) in our study. Representations of gender, occupation and marital status have been found to be in accordance with socio-demographic profile of our country. Out of hundred cases of amputation, indication for same was maximum with motor vehicle accidents (57%) followed by electrocution with 23%. **Discussion:** In our study, the most common psychiatric co-morbidity was Major Depressive Disorder(53%) followed by with Generalized Anxiety Disorder in 15% and Panic Disorder in 9%.

KEYWORDS: Amputation, Quality of life, Major Depressive Disorder.

INTRODUCTION

Amputation is the removal of one or more parts of the body and can be as a result of unprecedented havoc or natural disasters; like accidents, earthquakes, terrorism and war, or carried out due to medical reasons with the motive to improve health outcomes and quality of life of patients. In cancer patients, it is performed as a lifesaving procedure to protect them from further malignancy of the body part or to other parts of the body. In debilitating

vascular conditions of the extremities, limb gangrene, leprosy, etc., it is performed to prohibit further progression or to restore functions of that body part by making it amenable for prosthesis, and thereby making the person mobile. Inadequate treatment of diabetic foot ulcers are also precursors of lower limb amputation.^[1]

Irrespective of the cause of amputation, it brings a significant and drastic change in a person's life, and one

goes from a stage of shock, to acknowledgement, and finally adjustment.^[2] Amputation is considered as triple insult, as it brings loss of function, loss of sensation, and loss or change of body image.^[3] It also affects the individuals at psycho-social level, and can have long-term economic implications on the life and opportunities for employment.^[4] As compared to the upper limb amputees, the lower limb amputees experience more changes in their life after the amputation.^[5] There is an association between age and cause of amputation. Trauma and cancer are the major causes of amputation.^[6,7]

There is meager data regarding the overall incidence and etiological background of lower limb amputation in India. According to World Health Organization, India has the highest number of road accidents in the world with 16.8 fatal injuries per 100,000 population, and 38.9 non-fatal injuries per 100,000 population as per the data from 2006.^[8] From these figures, it can be stated that traumatic road accidents has been a significant cause of lower limb amputation. A cross-sectional study reported vehicle accidents as the major cause of amputation. Individuals suffering traumatic limb loss at any age are likely to suffer subsequent difficulties with their body image, but these relationships are more striking in the younger age groups who have experienced traumatic injuries. The psychological reactions to amputations are clearly diverse and range from severe disability at one extreme; determined and effective resumption of a full and active life at other end. The individual's response to a traumatic event is influenced by personality traits, psychiatric pre morbid state, gender, prolonged disability of traumatic events, lack of social support and inadequate coping strategies. There is lack of literature on prevalence of various specific psychiatric disorders after amputation. In view of less number of studies in this field from Kashmir, increase number of patients referred to our hospital which is a tertiary care hospital and ongoing conflict which is there from past 27 years, we intended to take up this study to find out psychiatric co morbidities in these patients.

AIMS AND OBJECTIVES

1. To study psychiatric co morbidities in patients with Amputation by using Mini International Neuropsychiatric Interview (MINI) scale.
2. To find out the socio-demographic details of patients of Amputation.

MATERIALS AND METHODS

This was a prospective, observational, descriptive study conducted in the department of Psychiatry at a tertiary care teaching hospital. The sample size included 100 patients. The study included adult patients between the age group 16 to 75 years with history of amputation and referred to Psychiatry Department for evaluation. Patients not willing for participation, informed consent and critically ill were excluded. Successive patients satisfying the inclusion and exclusion criteria were taken

up for the study and administered the Mini International Neuropsychiatric Interview (MINI) for evaluation of psychiatry morbidity. Each patient was informed about the purpose of interview; his/her consent was obtained and strict confidentiality was ensured. The interview was conducted as soon as possible after the patient had satisfactorily recovered medically and was able to cooperate for the interview. Those patients referred to Psychiatry OPD for evaluation were interviewed in the outpatient department itself and other patients were interviewed in their respective wards of initial admission. General description, demographic data and psychiatric history were recorded using the self-designed study proforma and the MINI.

Research instrument

1) Study case record /proforma: It consisted of a self-designed interview schedule to record the socio-demographic data, the psychiatric history including that of the suicide attempt, mode of suicide, causes / factors, the physical examination and International Personality Disorder Examination mental status examination.

Mini International Neuropsychiatric Interview

(MINI): The MINI is a short structured diagnostic interview developed jointly by psychiatrists and clinicians for ICD-10 and DSM-IV psychiatric disorders. It has an administration time of approximately 15 minutes and is used as a short, accurate structured psychiatric interview for clinical trials and epidemiological studies. It has high kappa value (0.5 and greater), sensitivity (0.7 and greater), specificity/negative predictive value (0.85 and higher) and positive predictive values (0.75 and greater for neurotic disorders).^[9]

Statistics: Data obtained was then entered in Microsoft excel and analyzed in Statistical Package for the Social Sciences (SPSS. version 17) for descriptive statistics.

RESULTS

In this study, one hundred (n= 100) participants with history of Amputation were analyzed. Males were 67% (n =67) and females were 33% (n = 33). Majority (61%) were in the middle age group of 36 to 55 years. Married were 73%(n = 73) and unmarried were 27%(n= 27). In this study, 41% (n = 41) studies till higher secondary level followed by primary education by 27% (n = 27) were illiterate. Students were maximum with 37% of the total sample. 63% of patients belonged to nuclear type of family.

Table 1: Characteristic and socio-demographic details of the participants.

Characteristics	Value (Percentage)	
Participants with Attempted suicide		100
Age (years)	16-35	18(18%)
	36-55	61(61%)
	56-75	16(16%)
	>76	5(5%)
Gender	Male	67(67%)
	Female	33(33%)
Marital status	Married	73(73%)
	Unmarried	27(27%)
	Divorce	0(0%)
Family type	Nuclear	63(63%)
	Joint	37(37%)
Education	Illiterate	10(10%)
	Primary	27(23%)
	Secondary	12(12%)
	Higher Secondary	41(41%)
	Graduation	14(14%)
Occupation	Student	37(37%)
	Salaried	35(35%)
	Business	17(17%)
	Unemployment	11(11%)

Table 2: Indication for amputation in the participants.

Characteristics	Value (percentage)	
Indication for Amputation	Motor Vehicle Accident	57 (57%)
	Fire Arm	8 (8%)
	Electrocution	23 (23%)
	Others	12 (12%)

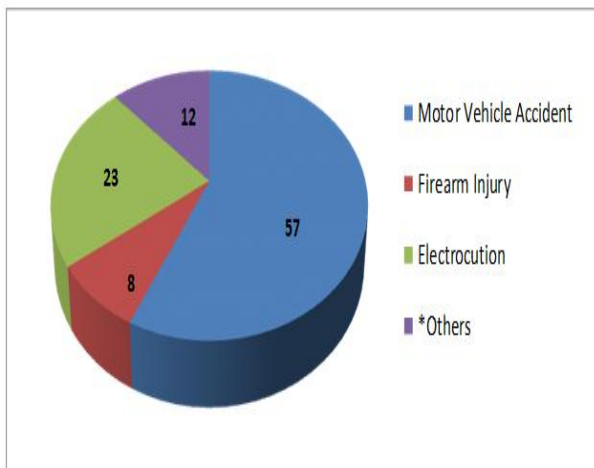


Figure 1: 57% of patients met with motor vehicle accident, followed by 23% with electrocution and firearm injuries were 8%. *Others included injuries due to fall from tree and machinery mishap which constituted 12%.

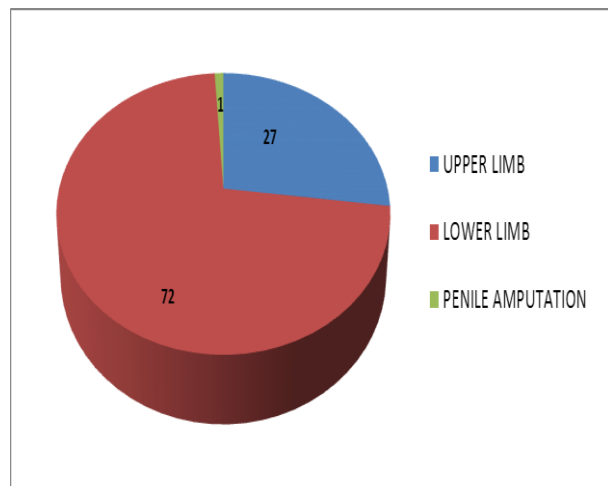


FIGURE 2: 72% of patients had lower limb amputation followed by 27% upper limb amputation. One patient had penile amputation.

Table 3: Site of amputation in the participants.

Site of Amputation	Upper Limb	27(27%)
	Lower Limb	72 (72%)
	Penile Amputation	1(1%)

Table 4: Site of amputation in the participants.

Psychiatric co-morbidity	Distribution
MDD	53%
PTSD	19%
GAD	15%
Panic Disorder	9%
Phantom Limb Phenomenon	4%

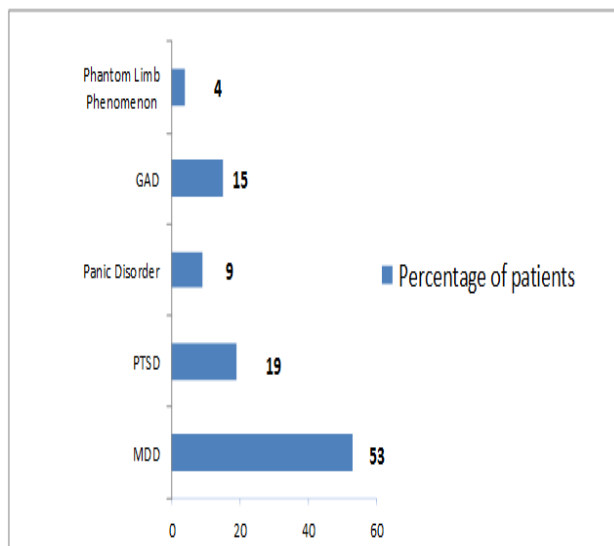


Figure 3: 53% of patients had major depressive disorder (MDD), PTSD was present in 19% patients, followed by 15% patients with generalized anxiety disorder (GAD), Panic Disorder with 9% and Phantom Limb Phenomenon in 4% of patients.

DISCUSSION

In this study an attempt has been made to study different types of Psychiatric morbidity in patients who were referred to Psychiatry to undergo psychiatric evaluation in a tertiary care hospital in Srinagar. The significant findings of our study are as follows: (1) The prevalence of Psychiatric morbidities in patients of Amputation.; (2) Male patients have higher levels of PTSD symptoms (3) Female patients have higher level of Depressive Symptoms. We used Mini International Neuropsychiatric Interview (MINI) which is a validated scale and is used in various studies across the globe for psychological assessments.

Out of hundred cases of amputation, 73% percent of the patients were married. 41% of patients were higher secondary. Similar findings have been reported by A. Mozumdar et al where they reported married as 65.7%, and with a higher secondary level of education to 58.8%.^[10] Similar finding of more number of married is found in another study.^[11] The findings in our study which showed higher percentage of patients having studied till higher secondary was in contrary to Shukla et al who reported maximum of illiterates in his study.^[12] Sixty one percent of patients were in a middle age group (36-55) followed by eighteen percent in age group of 16-35. This finding was similar to A. Mozumdar et al who reported middle age group constituted of nearly forty four percent.^[10]

In our study, males outnumbered females in a ratio of almost 3:1 with males being 67% and females were 33%. The result is constant with the study done by Shukla et al.^[12] The reason could be that male are more readily seeking treatment and rehabilitation as compared to

females and since male are more prone for exposure to traumatic events.

In our study majority of patients were Muslims with 91% of total sample size. This can be explained by the fact that Kashmir is a Muslim majority part of Jammu & Kashmir state where Hindu and Sikh are minority group. 63% of patients were living in a joint family. In our study, 57% accounts for motor vehicle accident which leads to amputation. It can be explained by tremendous increase in number of vehicles and poor condition of roads. Electrocution consisted of 23% and fire arms with 8%. Others means which lead to amputation were fall from a tree and machinery mishap with 12% collectively. Similar findings have been seen in the study of Margoob et al.^[11] In our study, 72% of patients had lower limb amputation. The individuals with lower limb amputation showed relatively higher mortality rates due to cardiovascular diseases than the general population.^[13,14] In our study, the most common psychiatric co-morbidity was Major Depressive Disorder with 53% of total sample size. Our results are in accordance with study done by Shukla et al (70.2%).^[12] Similar values were found in the study by Manzoor I. et al(63%).^[15] In our study Post Traumatic Stress Disorder was found in 19% of patients followed by Generalized Anxiety Disorder was found in 15% and Panic Disorder in 9%. Phantom Limb Phenomenon was found in total of 4 patients. The higher prevalence of PTSD is because of the ongoing conflict in this part of world and has been seen in other studies.^[11] The results of this study are supported by the study of Fukuniski et al(33.9%).^[16] The low level of Phantom Limb Phenomenon are supported the study of Ebrahimzadeh et al.^[17] Our study is further supported by Melzack^[18] and Pezzin et al.^[19] who reported that with time phantom limb sensations decrease. Apart for surgery, the following points need to be taken care of so that a patient once done with amputation can do well both physically as well psychologically.

1. Patients to be taken up for amputation need to undergo psychiatric evaluation prior to surgery so that patient can be made ready psychologically for the said operation. By doing so patient can deal with the outcome of amputation in a better way and can face the world with zeal and zest.
2. Once patient is done with amputation, he should be made to visit psychiatry department for regular counseling. Since from our study we can see all patients had some sort of psychiatric co-morbidity. By attaching patient to psychiatric department, chances of him/her having a psychiatric problem will be less.
3. Debriefing refers to conventional sessions that revolve around the sharing and examine of information after a specific event has taken place. Depending on the situation, debriefing can serve a variety of purposes. For example, these sessions can be used for military, psychological or even academic purposes. Originally, debriefing sessions were used strictly for military

purposes. During these sessions, unit leaders gathered information from troops returning from operations. This information concerned events that occurred on the battlefield, and so each soldier was encouraged to add to the discussion to ensure a full and accurate account of the operation. Debriefing is a formal version of providing emotional and psychological support immediately following a traumatic event, the goal of psychological debriefing is to prevent the development of stress and other negative sequelae. Most psychological debriefing interventions involve a single session which might last between one and three hours, in the days immediately following a traumatic event. Since debriefing is a good modality for patients of amputation but several studies have contradictory results which showed it increases risk of developing stress and related problems.

CONCLUSION

In this study we found that amputation was more common in middle age group. More than half of the patients were married with most of them having higher secondary level education. More than 50% patients belonged to joint families and there were a high number of students. Males outnumbered females with 67% being men. Major depressive disorder was the predominantly found psychiatric co morbidity in the patients followed by Post Traumatic Stress Disorder.

Findings of this study also indicated a strong relationship between levels of education, indication of amputation with the type of psychiatric co-morbidity. Thus the above factors would have to be focused upon, in the management and during the counseling sessions of patients of amputation.

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