

FREQUENCY OF POST-TRAUMATIC AMPUTATION PATIENTS PRESENTING AT A TERTIARY CARE HOSPITAL OF PESHAWAR

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ABSTRACT

Objective: To assess the frequency of traumatic amputations at Tertiary care Hospital, Peshawar.

Material & Methods: This was a cross sectional study on retrospective data chart, conducted in the Department of Orthopaedics, Lady Reading Hospital, Peshawar, Pakistan, involving 131 patients who had traumatic amputations from June 2017 to May 2018.

Results: Out of 131 patients, there were 101 male and 30 female. Road traffic accidents resulted in most of traumatic amputations.

Conclusion: Road traffic accidents were the leading cause of amputation in the study.

Keywords: Traumatic amputation.

This article may be cited as: Bukhari SI, Qadir RI. Frequency of post-traumatic amputation patients presenting at a tertiary care hospital of Peshawar. *J Med Sci* 2019; 27: (3) 210-212.

INTRODUCTION

Traumatic hand or digit amputations can be catastrophic injuries, and often occur in young productive patients¹⁻³. Figures from the US national database have shown that amputation injuries represent 1% of all trauma attendances. Finger and thumb amputations were most common (69%), and more proximal amputations of the upper limb contributed a further 9%.³ Most patients with amputations are initially managed by non-specialists, before referral to microsurgical units.

Good initial management is a key determinant of outcome, and expertise in the management of amputation is only available in specialist centres in most countries⁴. We provide a summary of the initial management of amputation, with emphasis on amputate preservation, indications for replantation (reattachment surgery), and potential outcomes, to help non-special-

ists manage these emergencies and refer them appropriately. Trauma is the leading cause of death in the early decades of life. Worldwide, most of trauma cases result from road traffic accidents. Road traffic accident cases are projected to increase by approximately 65 % in the coming 20 years, with > 90% of related deaths occurring in developing countries¹. Globally, 2011-20 has been designated as decade for road safety because 2 people die and upto 95 are injured every minute on the world roads².

Lady Reading hospital, being the largest tertiary care hospital in Peshawar, faces the brunt of trauma cases. Rationale of the study was to ascertain the burden of traumatic amputations carried out at Lady Reading hospital, so that we can sensitize our population as well as caregivers about the gravity of the situation and to take counter measures in light of this data.

MATERIALS& METHODS

Retrospective chart review with data collection from operation theater records at Lady Reading Hospital, Peshawar from 1st June 2017- 31st May 2018. All patients who underwent traumatic amputation at Lady Reading Hospital in the said period, were included in this study. There were no exclusions. All patients had

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Date Received: 14th June, 2019
Date Revised: 20th August, 2019
Date Accepted: 10th September, 2019

written informed consent for amputation. SPSS 16 was used for analysis. Pie charts were used to elaborate numerical data.

RESULTS

101 male vs 30 female. Mean age was 32.32 + 17.87 SD. Causes of amputation: road traffic accident (84), firearm injury (21), fall from height (11), workplace injuries (9), electric burn (6). Fig 1 Level of amputations: Fingers (38), Toes (28), below-knee (20), above-knee (12), trans-knee (8), mid-foot (7), metacarpal (5), above-elbow (5), below-elbow (4), wrist (3), hip disarticulation (1). Fig 2 Workplace injuries resulted in 6 finger, 1 wrist, 1 toe and 1 above knee amputation. Electric burn was responsible for 2 above elbow, 1 below elbow, 1 above knee, 1 below knee and 1 wrist amputation. Fall from height resulted in 2 trans knee, 2 below knee, 1 finger and 6 toes amputations. Fire arms were responsible for 2 trans knee, 1 metacarpal, 4 finger, 3 mid foot, 2 toes, 3 below elbow, 3 below knee, 2 above knee amputations, and 1 hip disarticulation. Road traffic accidents resulted in 24 finger, 19 toes, 4 trans knee, 4 mid foot, 4 metacarpals, 2 below elbow, 15 below knee, 3 above elbow, 8 above knee, and 1 wrist amputation.

DISCUSSION

Limb amputation is not an uncommon procedure carried out to save the life of the patient by general, trauma and vascular surgeons. At Lady Reading hospital, all traumatic amputations are dealt by trauma and orthopaedic department which makes our data unique in that all cases have been accounted for and included in this study. Causes for traumatic limb amputation differ from region to region. Our aim was to get data on the frequency of traumatic amputations carried out at our hospital so that preventive measures can be undertaken.

Road traffic accidents account for almost 65% of amputations carried out as per our study. Accidents beget economic woes and it is estimated that impact of road traffic accidents is roughly about 1% of GDP in low income countries, 1.5% in middle income and 2% in high income countries³.

Road traffic accidents are projected to increase by about 66% by 2020. However, as been studied, there will be disproportionate increase across the globe with projected increase of more than 80% in developing countries against 30% fall in developed countries. There seems to be direct relationship between road traffic accidents and per capita income⁴.

This study is focusing on traumatic amputation as the end point. We observed in this study that road traffic accidents are the leading cause of amputations, but it must be known that some trauma victims never reach hospital and they succumb to injuries on the spot. According to World Health Organization, road traffic accidents will be 4th leading cause of mortality by 2030⁵. Our findings are in consistent with other studies which show that developing countries are finding it difficult to cope with the epidemic of road traffic accidents⁷.

Firearm injuries are the second leading cause of traumatic amputations in our study. Few years back, when terrorism raged in our part of the world, this would definitely have topped the list but peace has finally prevailed. Tribal setups, poor access to judicial system as well as poor economy are largely responsible for it and if we have to address it, then we must educate our masses.

Another important cause for amputation in our study was workplace injuries. Labour force in Pakistan is mostly illiterate with no access to safety measures. Their rights should be ensured and safety guidelines should be strictly applied.

Limitations of the study are the small sample size. The intent was to find out the causes of traumatic amputation and educate our population. We think that

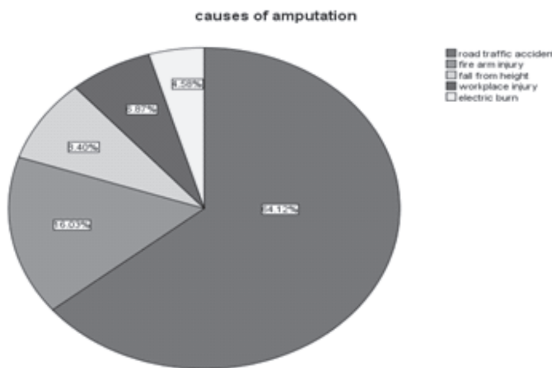


Fig 1

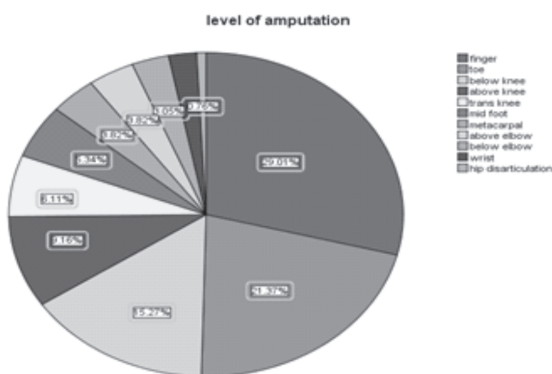


Fig 1

our study has highlighted the causes and has shown us where to act to address this important issue.

CONCLUSION

Traumatic amputations are mostly due to road traffic accidents in our study. Health care providers need to educate population about road safety measures.

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CONFLICT OF INTEREST: Authors declare no conflict of interest

GRANT SUPPORT AND FINANCIAL DISCLOSURE NIL

AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under:

Bukhari SI: Data collection, Hypothesis, Result, Discussion.

Qadir RI: Literature Review.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.