



MAJOR LIMB AMPUTATIONS: OUR EXPERIENCE IN A TERTIARY CARE HOSPITAL, VISAKHAPATNAM

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ABSTRACT The purpose of this study was to outline the patterns, indications and short-term complications of major limb amputations attending King George Hospital, Tertiary Care Centre, Visakhapatnam. This was a retrospective study at the King George Hospital between June 2019 and May 2020. Data were collected using previous medical records of the patients. A total of 80 patients were entered into the study. Their ages ranged between 20–70 years with an average age of 53.5 yrs. Males outnumbered females by a ratio of 4:1. The most common indication for major limb amputation was diabetic foot complications followed by vascular disease, trauma, gas gangrene I and high voltage electrical burns respectively. Lower limbs were involved in 77.5% of cases and upper limbs in 22.5% of cases giving a lower limb to upper limb ratio of 3.4:1. Below knee, amputation was the most common procedure performed in 46.25%. There was no bilateral limb amputation. All the aspects regarding the type of amputation, complication rates, etiologies, have been studied. In limb amputations, the indications are many and the pattern varies from place to place. Complications of diabetic foot ulcers, PAOD and trauma resulting from road traffic crashes were the most common indications for major limb amputation in our environment. The majority of these amputations are preventable by the provision of health education, early presentation and appropriate management of the common indications.

KEYWORDS : amputation, indications, health education, prevention

INTRODUCTION

Limb amputation has a history of 2500 years dating back to the time of Hippocrates. Amputation is derived from the Latin word amputare (to excise, to cut out). Amputation has been practiced for trauma, peripheral vascular disease, tumor, infection and congenital anomalies. Limb amputation is considered the last resort when limb salvage is impossible. The loss of a limb by any individual has profound economic, social and psychological effects on the patient and their family. Major limb amputations carry a fairly high perioperative mortality and morbidity. In developing cities like Visakhapatnam, the majority of amputees are middle-aged and the major cause of limb amputation varies from one hospital to another. Most often patients in developing countries present late when limb salvage is not a viable option. This study was conducted to determine the pattern, indications and short-term outcome of major limb amputations in our setting and to compare our experience with that of other published information.

MATERIALS & METHODS:

Study Design: Retrospective Study

Place Of Study: Visakhapatnam

A sample size of 80

Period of Study: June 2019 to May 2020

Data were collected from the medical records of the hospital.

Patient Selection:

Inclusion Criteria: 1. Inclusion criteria were all patients who underwent major upper and lower limb amputation, more than 18 years of age.

Exclusion Criteria: 1. Exclusion criteria were patients who were less than 18 years of age and more than 70 years of age
2. Those patients who underwent amputation from another center and came to our hospital for follow up or management of complications.

METHOD:

1. Words like Limb amputation (above the elbow, below the elbow, above the knee, below the knee, through knee) Gangrene, Diabetes mellitus, PVD, Wound infection, Wound dehiscence and Wound debridement has been searched for in the medical records.

2. The following parameters of all the patients who had major limb amputation during this period were recorded:

Age, Sex, Indication for amputation, Level of amputation and Complications.

OBSERVATION AND RESULTS:

Over 12 months, 80 Major Limb Amputations were performed. The age of the patients ranged from 18 to 70 years.

Level of Amputation	Frequency	Percentage
Above Knee	22	27.5%
Below Knee	43	53.75%
Above Elbow	9	11.25%
Below Elbow	6	7.5%

Table 1: Age Distribution Of The Patients

Age group	No. of patients	Percentage
18-30	18	22.5%
31-40	13	16.25%
41-50	24	30%
51-60	14	17.5%
61-70	11	13.75%

80% of the amputees were males. 20% of the amputees were females. Our study had a Male Female ratio of 4:1

Table 2: Indications Of Amputation

INDICATION	FREQUENCY	PERCENTAGE
Diabetic foot	42	52.5%
PAOD	18	22.5%
Trauma	15	18.75%
Infective etiology	3	3.75%
High voltage electric burns	1	1.25%
Malignancy	1	1.25%

Diabetic foot complications were the most common indication for MLAs in our series. Followed by are peripheral arterial occlusive disease, trauma, infective causes, high voltage electrical burns and others.

The Levels of amputation, their frequency and percentage are given in the table below.

Level of Amputation	Frequency	Percentage
Above Knee	22	27.5%
Below Knee	43	53.75%
Above Elbow	9	11.25%
Below Elbow	6	7.5%

Lower limbs were involved in 65 (81.25%) cases and upper limbs in

15(18.75%) cases giving a lower limb to upper limb ratio of 4.3:1. There was no bilateral limb amputation.

The hospital stays of patients ranged from 9 to 58 days with a mean duration of 22.4 days. The majority of patients (92.5%) had a good recovery.

There was a total of 6 deaths giving a mortality rate of 7.5%. The main causes of death were complications of sepsis in 4(66.7%) of cases, diabetes in 2(33.3%) cases.

Post-operative complications occurred in patients (30%). Details of postoperative complications are shown in the table below.

Complications	Frequency	Percentage
Surgical Site Infection	16	20%
Wound Dehiscence	4	5%
Stump Gangrene	3	3.75%
Revision Amputation	1	1.25%

CONCLUSION:

The most common indications for major limb amputations were Complications of diabetes mellitus, vascular insufficiency & trauma in our region.

Preventive Measures:

A. Patient education regarding lifestyle modification, proper control of diabetes, and foot care will play a pivotal role in the prevention of such morbidity in diabetic patients.

1. Measures on prevention of road traffic crashes and
2. Community health education

to encourage early presentation to the hospital will reduce the number of patients undergoing major limb amputations in this region.

No matter how good the prosthesis and replacement services available are, it will never be good enough to replace an anatomically normal and functional limb.

So, it can be stressed enough that prevention is better than cure.

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