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Original Research Paper

General Surgery

A STUDY OF SURGICAL MANAGEMENT OF DIABETIC LIMB COMPLICATIONS AMONG RURAL POPULATION

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ABSTRACT Surgical complications of diabetes mellitus has been a common clinical problem among the rural population because of illiteracy and poor health education. The present study was undertaken to evaluate patients with respect to age, sex, clinical presentation and specific investigations. The patients were treated by conservative or surgical methods and the outcome was monitored. The majority of the patients were males with peak age group in the sixth decade. Septic lesions were more than the neuropathic or the ischaemic lesions.

KEYWORDS :

INTRODUCTION

In this millennium where mankind has succeeded in deciphering the human genetic code, the issue of chronic wound management still remains an enigmatic challenge. Chronic wounds especially non-healing types are one of the most common surgical conditions a surgeon comes across among patients with diabetes.

OBJECTIVES

1) To study the pattern of presentation of patients with a diabetic limb in a rural teaching hospital.
2) To evaluate the efficacy of available treatment options in salvaging the affected limb.
3) To study the impact of socio-economic status on management of diabetic limb complications.

METHODS

A prospective study was carried out on 100 patients with diabetes mellitus with associated surgical complications who presented to the General Surgery Out Patient Department at Smt. Kashibai Navale Medical College and General Hospital from December 2019 to November 2020.

OBSERVATIONS AND RESULTS

Age Incidence

The average age of patients was 65 years. It is Implied that the most common age group is 61-70 years.

Sex Incidence

In the present series of 100 cases, 70 were males and 30 were females.

INCOME/SOCIO-ECONOMIC STATUS

In this area most of the people are agriculturists and are ignorant of the sequelae of diabetes mellitus hence the high incidence among them. In literature it is reported that the disease is common in people with sedentary lifestyle. But the present study shows that it is common in people with poor socio-economic status also.

FAMILY HISTORY

The family history of diabetes was positive in 34% and negative in 66% of the patients.

PRECIPITATING CAUSES

The majority of foot lesions developed without an apparent cause. But majority of the neuropathic patients gave a history of trauma.

Precipitating causes	Number of foot lesions	Percentage
Spontaneous	46	46
Infected nail bed	22	22
Trauma	32	32
Total	100	100

INCIDENCE OF INVOLVEMENT OF THE PARTS OF THE BODY

The lesions occurred most commonly in foot in about 78% of the patients and in the leg in 20%. The occurrence of the lesions was common among the agriculturists who walk barefoot and neglect the early inflammation.

BONE INVOLVEMENT

X-ray showing	Number	Percentage
Bone involvement	30	30
No Bony lesion	70	70

Distribution of types of lesions

Among the study of 100 patients total septic lesions were seen in 84% and ischaemic lesions were seen in 16%.

TREATMENT

Minor operative procedures such as incision and drainage, slough excisions, etc were carried out in 80 patients.

Disarticulation of toes was carried out in 6 patients. Below knee amputation and above knee amputation were carried out in 6 and 2 patients respectively.

In 10 limbs wound coverage was done with split skin graft.

DISCUSSION

Incidence of septic lesions

The incidence of septic lesions in this series appears to be very high. It is concluded that septic lesions are supposed to be most common, compared with other types of lesions.

Amputation rate

Amputation has been one of the procedures in the treatment of ischaemic lesions and was required as a part of sepsis related management. Amputation rate may be higher in a poor socio-economic group compared to affluent parts of the society.

Types of articial limbs used

For transtibial amputation-Patellar tendon bearing socket

For above-knee amputation- Transfemoral prosthesis

Measures taken to prevent complications in the other foot

To prevent diabetes complications in the other limb we educate the patient to make commitment to managing their diabetes, eat healthy foods, include physical activity in their daily routine and keep their blood sugar under control.

Patient education revolved around-

- Wash your feet daily.
- Wash your feet in lukewarm water once a day. Dry them gently, especially between toes. Sprinkle talcum powder or cornstarch between your toes to keep the skin dry. Use a moisturizing cream or lotion on the tops and bottoms of your feet to keep the skin soft.
- Inspect your feet daily.
- Check your feet for blisters, cuts, sores, redness or swelling once a day.
- Trim your toenails carefully.

- Trim yours nails straight across. if you have any nail problems or poor feeding in your feet, ask your doctor about professional nail trimming.
- Don't walk barefoot.
- Protect your feet with comfortable socks and shoes, even indoors. Even a single blister can lead to an infection that will not heal.
- Wear clean, dry socks.
- Wear socks made of fibers that pull sweat away from your skin such as cotton and special acrylic fibers and not nylon. Bulky socks often fit poorly and a poor fit can irritate your skin.
- Use foot products cautiously.
- Don't put chemicals on your feet such as wart removers. See your doctor or podiatrist for blisters, corns or warts.
- Don't smoke or use other types of tobacco.Smoking reduces blood flow to your feet. Talk to your doctor about ways to quit smoking or to stop using other types of tobacco.
- Schedule regular foot check-ups.
- Your doctor can inspect your feet for early signs of nerve damage, poor circulation or other foot problems.

CONCLUSION

Good results can be achieved in our set-up also if we start to adopt the team approach to the diabetic foot lesions. Specific emphasis should be given on patient education about how to care for the feet such as pairing of nails, importance of wearing footwear, early report to the physician if an ulcer develops, importance of continuing treatment even after leaving hospital, the need to modify diet, avoidance of smoking, reduction of weight and rehabilitative measures.

It is concluded that diabetes mellitus and its surgical complications are very much prevalent in rural areas. The prevalence of diabetes mellitus and its surgical complications can be attributed to poor patient knowledge, education and awareness of the disease.