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Research Article

**STUDY TO DETERMINE THE FACTORS AFFECTING
DIABETIC FOOT MANAGEMENT**Dr Khoula Fiaz¹, Dr Muhammad Idrees², Dr Ali Hussain³¹ Islamic International Medical College, Rawalpindi² Khyber Medical College, Peshawar³ BHU Dhamthal, Teh Zaferwal, Distt Narowal

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Abstract:**Objective:** To know the factors affecting diabetic foot management in our setup.**Study design:** A case series.**Place and Duration:** In the west Surgical department of Benazir Bhutto Hospital, Rawalpindi for one year duration from November 2018 to October 2019.**Methodology:** A total of 112 patients with diabetic diagnosis and treatment were selected for the study. In this study, the final group consisted of one hundred patients. A careful clinical examination was recorded including a detailed history of diabetic foot ulcers and diabetes duration, vascular and sensory evaluation. Treatment policy is divided into a patient education program and intensive management of diabetic foot surgically.**Results:** Of hundred subjects, male were 76 and female were 24. The 10 years was the mean duration of diabetes. Thirty nine percent were fully treated, minor amputations in 27%, extensive amputation in 10%, 22% rejected from treatment, mortality was 2%, nine percent had a new problem and seven percent required further surgery**Conclusion:** There is a lack of awareness about foot care in diabetics and instructions are required in this area.**Key words:** Diabetes Mellitus, Diabetic Foot, Limb Amputation, Diabetic Foot Ulcer, Foot Healing.**Corresponding author:****Dr Khoula Fiaz,**

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INTRODUCTION:

Diabetic foot disease is a chief health issue affecting 16% of 200 million diabetic patients globally. The main amputation above or below the knee is a fear-related diabetes complication and increases mortality and morbidity and effects the patient's life quality¹⁻². After amputation, mortality rate varies from 14 to 41% per year, at 3 years it varies from 35 to 65% and at 5 years it ranges from 39 to 80%. And in most cases severity is more than malignant tumors³. Foot ulcers cause significant physical, emotional and economic losses. Approximately 21-42% of diabetic patients have neuropathy, and symptomatic peripheral vascular disease was established in 50% within 20 years of diagnosis⁴. Other factors contributing to the ulceration of the diabetic foot are extreme stress for the cultivator, recurrent trauma, and an increase in the rate of onychomycosis. Obesity and poor vision related with diabetes can also affect self-care⁵. Since provided that high quality care needs for better treatment results, it is helpful to determine the causes that disturb treatment outcomes for complications of diabetic foot⁶. In this region, diabetic foot disease is aggravated by sociocultural reasons such as the pervasiveness of barefoot gait, minimum information on complications of diabetic foot, Jarrah long term treatment (charlatans), and late transfer to hospitals when amputation is unavoidable⁷. This major trial executed by diabetic foot problems requires inhibition and effectiveness is the treatment in the early disease stages.

MATERIALS AND METHODS:

This case series was held in the west surgical department Benazir Bhutto Hospital, Rawalpindi for one year duration from November 2018 to October 2019. A total of 112 patients with diabetic diagnosis and treatment were selected for the study. In this study, the final group consisted of one hundred patients. All had diabetic foot ulcers, varies from superficial to deep ulcers, and very few have bones and tendons exposed. In addition to routine data collection, attention was paid to age, gender distribution, smoking history, diabetes duration, hypertension, and history of amputation or diabetic injury. Information taken on the wound duration, current diabetic foot; difficulty walking, pain severity, treatment and investigation so far included. Further information included foot examination findings such as nail and skin status, protective sensation, and vascular prestige. Treatment policy engrossed on 2 main goals. The first is to teach the patient about complications of diabetic foot disease and the 2nd goal is to offer aggressive and intensive diabetic foot ulcers treatment. Family members were asked to sustenance patients in managing foot care. Nearly all individuals have infected ulcer of the diabetic foot, and the late arrival was due to the

worsening of the wound, despite treatment from local practitioners.

All the information was recorded in Performa and the results were analysed in percentage and frequency.

RESULTS:

The authors examined hundred diabetic foot ulcers. Of the 100 patients selected for the study, 76% of men and 24% of women were between 30 and 60 years of age, with a mean age of 45 years. The diabetes history ranges from eight to twenty years, with ten years average. Of the 100 patients with diabetic foot, 39 were completely treated; 28 men and 11 women. 27 patients had minor amputations and no gait impaired. The details are given in Table I.

Type of Amputation	Male	Female
Toe	14	7
Foot / ankle	4	2
Below Knee	6	2
Above Knee	1	1

Table I. Details of amputations

On the other side, ten patients endured major amputations counting below knee, including knee and above knee amputations. Due to sepsis, two patients were died. 9 individuals advanced to a new wound elsewhere or on the opposite foot. A second operation was necessary.

DISCUSSION:

Perceptive of which clinical factors forecast a negative outcome may help the surgeons to deliberate much aggressive therapeutic and diagnostic interventions⁸⁻⁹. Armstrong noted that the risk of amputation of senior members was greater in bones penetrating wounds than in those without deep structures. A large prospective study by Benjamin included males, raised serum inflammatory markers (ESR, C-reactive protein and leukocyte count), long diabetes duration, high serum creatinine, poor glycaemic control, and weak pedal pulses are the other factors related to diabetic foot¹⁰. Other authors' studies have identified additional factors supporting limb amputation such as the previous foot infection, presence of fever, antibiotic-resistant pathogens, delayed patient arrival, and ischemia of leg¹¹. In this analysis, 100 diabetic foot series were completely treated, 22% of the patients disappeared during treatment, 2% died, 27% underwent minor amputations and major amputations were done among 10%. The neuropathy was the most common reason for foot ulcers¹².

Yusof's retrospective study showed the incidence of lower extremity amputation. 203 patients were included in the study, 135 of whom were diabetic. Above-knee amputation was performed in 23 (17%) patients, under-knee amputation was performed in 44 (33%) patients, and local amputation of the foot was performed in 68 (50%) patients. The detection of early complications and Good diabetic control of will reduce decrease limb amputation, as well as the number of amputations¹³. The various psychosocial causes are the reason for diabetic foot complications. One cause for this is low understanding of diabetes, mainly in the aged people. Second, many individuals in rural areas have to travel long for seek treatment. In addition to providing foot and care services, these patients needed training, optimal treatment, and primary recognition of complications of diabetic foot. Third, a substantial number of subjects believe in traditional folk medicine and take it as primary health care. The Vickie R. Madigan study in Army Medical Centre in USA on the technique of limb rescue in patients with diabetic foot. All subjects in this analysis undergo concentrated treatment plan consisting of initial evaluation, frequency of future examinations, training recommendations, shoe modification, diagnostic tests, and specialist's referral when needed¹⁴. The results show a significant decrease in the amputations of the lower extremities from 34% in 1998 to 08% in 2004. The ADA currently suggests a full evaluation of the feet at least every year to determine the conditions of the high risk feet conditions. The examination includes the evaluation of anatomical deformations, skin tears and disorders of nail, sensation loss, decreased blood flow, and misuse of the foot. Diabetes with one or more high-risk diseases should be evaluated more frequently to prevent irreversible changes¹⁵. Patout's amputation prevention study in an African-American population resulted in an intensive incidence of foot ulceration, with a lower incidence of 79% in lower extremity amputation and 87% lower incidence of foot operations. Patient education formats include courses, workshops, skill exercises, behaviour change programs, and telephone reminders.

CONCLUSION:

It was concluded that there is a lack of awareness about foot care in diabetic patients and there is a need for training in this field.

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