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A Study on Clinical Profile of Patients with Diabetic Foot

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Abstract

Diabetes is a worldwide problem. A majority of diabetic patients develop foot ulcers in one point of time or other during the course of their illness. A significant number of such patients will require long-term hospital treatment and amputations. The etiopathogenesis of diabetic foot lesions are multifactorial. This study was conducted comprising of 100 patients of Diabetic foot in the Department of Surgery at Medical College. All the patients with Diabetes Mellitus presenting with foot ulcers, infection of foot and gangrene of foot. Incidence of Ulcer was common in patients with 6-10yrs of diabetes (36.53%), followed by 2-5 yrs group (26.92%). Gangrene was found more in 11-15 yrs group (30.43%), while incidence of abscess was relatively same among all groups, while incidence of cellulitis was common among 6-10 yrs group.

Keywords: Diabetes, Ulcer, Gangrene

Introduction

Diabetes Mellitus is the most common endocrine disorder ^[1] characterized by metabolic abnormalities and by long-term complications involving eye, kidney, nerves and blood vessels. Diagnosis of symptomatic diabetes is not difficult. When a patient presents with signs and symptoms attributable to an osmotic diuresis and hyperglycemia the diagnosis is equivocal. So also an asymptomatic patient with increased fasting blood sugar ^[2]. Problem comes when an asymptomatic patient comes with normal FBS. Then an oral glucose tolerance test is indicated. Diabetes is a worldwide problem. A majority of diabetic patients develop foot ulcers in one point of time or other during the course of their illness ^[3]. A significant number of such patients will require long-term hospital treatment and amputations. The etiopathogenesis of diabetic foot lesions are multifactorial. Diabetic neuropathies, vasculopathy, poor control of diabetes and bacterial infection are some of them ^[4].

The reasons for diabetic foot are

1. Foot is the most vulnerable part of body for injury and infection neglected by patient.
2. The site of preference for neuropathy and ischaemia is also the foot. Diabetes is one of the major problems of this generation with worldwide dimension. According to Modi *et al.*, overall incidence of diabetics in India is 1.2% ^[5]. The death in each year is due to its complications (2.1% in urban, 1.5% in rural), which are usually common in age group of 40 – 60 years affecting both sexes equally. The complications are more prevalent among the people of lower economic due to negligence, illiteracy and poverty ^[6].

The Lord Moynihan's great dictum "Surgery has been made safe for patients. We must now make the patient safe for Surgery".

Methodology

Source of Data

This study was conducted comprising of 100 patients of Diabetic foot in the Department of Surgery at Medical College.

Inclusion Criteria

All the patients with Diabetes Mellitus presenting with foot ulcers, infection of foot and gangrene of foot.

Exclusion Criteria

- 1) Patients with foot infections without Diabetes.
- 2) Patients with ulcer and Gangrene of foot other than Diabetic etiology.

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Methods of Collection of Data

- Detailed history taking.
- Clinical examination
- Investigations (Routine Laboratory investigation)
- Relevant special investigations.
- Conservative management with meticulous dressing and if needed major surgical interventions with its outcome.

Results

Table 1: Age distribution

Age (Years)	No of Patients	Percentage (%)
0-10	-	-
11-20	-	-
21-30	-	-
31-40	9	12%
41-50	27	27%
51-60	32	32%
61-70	20	20%

71-80	9	9%
81-90	3	3%
Total	100	100%

Of 100 cases studied, youngest patient was 31 years and oldest was 85 years of age. Highest number of cases was found in the age group 51-60 years (32%) followed by 41-50years (27%). Out of the 100 cases, 52 cases presented with ulcer, 23 cases with Gangrene of toe or foot. 21 cases with Cellulitis and 4 with Abscess.

Table 2: Mode of presentation

Mode of Presentation	No of cases	Percentage (%)
Ulcer	52	52
Gangrene	23	23
Abscess	4	4
Cellulitis	21	21

Table 3: Duration and Complications

Duration of Diabetes In Years	Ulcer (52)		Gangrene (23)		Abscess (4)		Cellulitis (21)	
	cases	%	Cases	%	Cases	%	Cases	%
0-1	3	5.76	-	-	1	25	3	14.29
2-5	14	26.92	5	21.73	1	25	4	19.04
6-10	19	36.53	3	15.78	-	-	5	23.81
11-15	7	13.46	7	30.43	1	25	4	19.04
16-20	5	9.62	3	13.04	-	-	3	14.29
>20	5	9.62	3	13.04	1	25	2	9.52

Incidence of Ulcer was common in patients with 6-10yrs of diabetes (36.53%), followed by 2-5 yrs group (26.92%). Gangrene was found more in 11-15 yrs group (30.43%), while incidence of abscess was relatively same among all groups, while incidence of cellulitis was common among 6-10 yrs group.

Discussion

Table 4: Comparison of Age

Study	Youngest	Oldest
Wheel, Lock and Root series ^[7] (1969)	32	89
Present study	31	85

When compared with Wheel, Lock and Root series, there is not much difference in youngest and oldest age group and in other study ^[8].

In the present study 59 were males and 41 female cases. The male to female ratio 1.44:1. The incidence is more among males probably as they are the breadwinners of the family and are mostly working out door, which makes them more vulnerable for trauma and sequelae.

In this study, 48 cases in this series had a history of trauma, before the onset of foot lesion.

Ulcer is the most common presentation (52%), followed by Gangrene (23%), Cellulitis (21%) and Abscess (4%).

Most of the patients had diabetes of 6-10 years duration, accounting for 27%, followed by patients having diabetes of 2-5 year, accounting 23% of study. Few of the patients were diagnosed as diabetics following admission and investigations.

Ulcer was common in patients with 6-10yrs of diabetes (36.53%), followed by 2-5 yrs group (26.92%).

Gangrene was found more in 11-15 yrs group (30.43%), while incidence of abscess was relatively same among all groups, while incidence of cellulitis was common among 6-10 yrs group.

Conclusion

- Most of the Diabetic complications develop in people above middle age most commonly in 5th and 6th decades of life.
- It occurs more common in male, men being more prone to trauma.
- Trivial trauma is present in most cases but patients may not be aware of the trivial trauma due to sensory neuropathy of the lower limbs.
- Ulcer is the more common form of presentation, followed by gangrene, cellulitis and abscess.

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