

## Clinical Profile and Management of Diabetic Foot

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### I. Introduction

Diabetes mellitus is a common endocrine disorder. Its knowledge is important because of high prevalence. This metabolic syndrome is characterized by an inappropriate elevation of blood glucose levels associated with alterations in lipid and protein metabolism, for which a relative or absolute lack of insulin is responsible.

Diabetes is certainly to be one of the most common and challenging health problem in the 21<sup>st</sup> century. In 1994 there were 20 million diabetics in India. In year 2000, they were 35 million and in year 2003, the number reached upto 55 million<sup>1</sup>.

Lower extremity ulcers represent a major concern for patients with diabetes, in view of both, the quality and an economic standpoint. Concerned studies evaluating quality of life, have shown that patients with diabetic foot ulcers have decreased physical and social function<sup>2</sup>. Out of all diabetics, who enter the hospital, 20% get admitted for foot problems<sup>3</sup>. In the past, amputation was a routine procedure often made by spreading infection. But now with the use of antibiotics and anti-diabetic drugs, modern trends in the management of diabetic foot are shifting more towards conservative side.

The present study emphasizes an imperative approach towards the treatment of diabetic foot and attempts were made to minimize the amputations and its associated social, economical and mental problems. In this series, 50 cases of diabetic foot were studied from May 2016 to January 2018.

### II. Materials and Methods

- 50 cases of diabetic foot admitted in Mahatma Gandhi medical college and hospital, Jaipur were examined.
- Only those cases that required admission were studied, hence patients with minor ulcerations and small foot lesions were not included in this series.
- All the patients were evaluated by recording detailed history, clinical examination details and post operative management. Categorization and tabulation of the data was done as presented in the observation section.

#### Observations

##### 1. Age and sex

Age group (years)	No. Of male patients	No. Of female patients	Total	Percentage
31-50	5	1	6	12%
41-50	5	3	8	16%
51-60	12	5	17	34%
61-70	10	6	16	32%
71-80	3	-	3	6%
Total	35(70%)	15(30%)	50	100%

##### 2. Nature of presentation:

Nature of presentation	No. Of patients	Percentage
Cellulites of foot	5	10%
Ulcer with cellulites	27	54%
Deep abscess with area of necrosis and gangrene	11	22%
Gangrene of single toe	3	6%
Gangrene of multiple toes	1	2%
Gangrene of foot with cellulites of leg	3	6%
	50%	100%

Type of foot lesion	No. Of patient	Percentage
Cellulites	35	70%
Abscess	11	22%
Ulcer	27	54%
Gangrene	15	30%

### 3. Vasculopathy:

Blood vessel affected	No. Of patient
Femoral artery	0
Popliteal artery	2
Posterior tibial artery	5
Dorsalis pedis artery	20
Total	27(54%)

### 4. Organism cultured:

Causative organism	No. Of patient
Staphylococcus Aureus	26
E.coli	11
Klebsiella pneumoniae	13
Haemolytic Streptococci	17
Proteus mirabilis	14
Mixed	30

### 5. Period of recovery:

Period of recovery	Patients
>1 week	7
1-3weeks	27
3-5weeks	9
>5 weeks	3

## III. Discussion

Prevalence of diabetes is greater in persons above the age of 50 years. Our study contains 50 patients with age ranging between 35 to 80 years. It was found that age group of 50- 70 years had the highest number of 33(66%) patients with definite male preponderance 35(70%) .

In most of the other series also there are more males affected than females. This is evidently related to the fact that diabetes itself is more common in males than females. Smoking and alcohol ingestion being more common in males, may be another contributory factor.

In our study , type of foot lesions are cellulitis 70%, ulcers 54%, abscess 22% and gangrene 30% . In some patients there was more than one lesion found. Patients with cellulites with ulcer were the commonest presentation.

In this study, absence of dorsalis pedis pulse was seen in 20 (40%) patients. Other peripheral pulses like posterior tibial were absent in 5(10%) patients . Popliteal pulse was absent in 2 (4%) patients. Dorsalis pedis was found absent in different studies like Edelson et al<sup>4</sup> 31.4% ,Apelquist et al<sup>5</sup> 56%. The absence of dorsalis pedis pulses is variable in the above studies. It may be due to vasculopathy, cellulites with edema and anatomical variations of dorsalis pedis artery.

Duration of hospital stay- mean duration of hospital stay in Bouter KP et al<sup>6</sup> was 40 days ,Gadepalli R et al<sup>7</sup> was 35days and in our study it is 30 days.

## IV. Conclusions

Diabetic foot is one of the commonest complication of diabetes mellitus, many times, due to patient's ignorance and lack of knowledge about the disease. Patient usually presents in the late stage of disease, may be because of illiteracy and poor knowledge. Detection of the diabetic foot by doctor is very simple. But to get good results and minimize the hospital stay, it requires aggressive treatment in terms of blood sugar control, improving nutritional status, meticulous debridement and minor amputation to control the local disease. Also use of broad spectrum antibiotics are required to avoid major amputation and complications like septicemia, vasculopathy and neuropathy.

So in a nutshell, a comprehensive multi-disciplinary team approach is necessary to save a "diabetic foot" and making it a "durable foot".

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