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Dr. Robindera Kour

In Charge Consultant Surgery,
Govt. Hospital Sarwal, Jammu,
Jammu and Kashmir, India

Dr. Gurpreet Kour

Medical Officer, Acharya Shri
Chander College of Medical
Sciences, Jammu, Jammu and
Kashmir, India

Dr. Iqbal Singh

Assistant Professor, Public Health
Dentistry, Indira Gandhi
Government Dental College,
Jammu, Jammu and Kashmir,
India

Dr. KK Gupta

Consultant Surgeon, Govt.
Hospital Sarwal, Jammu, Jammu
and Kashmir, India

Dr. Rajiv Sharma

Medical Superintendent, Govt.
Hospital Sarwal, Jammu, Jammu
and Kashmir, India

Study the Clinico-demographic-etiological profile of diagnosed chronic leg ulcer patients

Dr. Robindera Kour, Dr. Gurpreet Kour, Dr. Iqbal Singh, Dr. KK Gupta and Dr. Rajiv Sharma

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Abstract

Aim: to study the clinico-demographic-etiological profile of the patients diagnosed with chronic leg ulcer.

Materials and methods: prospective clinical study was conducted among 50 patients of lower limb ulcers who attended Surgery OPD of Government Hospital Sarwal, Jammu, India. The selected cases were studied with respect to detailed history along with clinical examination and required investigations were done to reach the definitive diagnosis.

Result: Most common age group involved in our study is <60 years (42%) followed by <40 years (34%). Male was the predominant sex involved accounting for 41 cases (82%) and females had the disease in 9 cases (18%). Majority of the patients i.e. 21 patients (42%) were farmers by occupation. The most common etiological type was Diabetic ulcers present in 17 cases (34%) followed by trauma 14 (28%). Diabetes Mellitus was the most common systemic disease in our study accounting for 21 patients (48%). The venous ulcers occurred more commonly in the gaiter zone (100%) whereas arterial and diabetic ulcers occurred mainly on the foot i.e., 100% and 52.9% respectively.

Conclusion: The present study concluded that the most common etiologies for chronic leg ulcer were diabetes mellitus and trauma. Results of this study may benefit development of clinical management policies concerning chronic wounds.

Keywords: Chronic leg ulcer, diabetic ulcer, traumatic ulcer

Introduction

Wounds are classified as either acute or chronic. Acute wounds heal in a predictable manner and time frame. The process occurs with few, if any, complications, and the end result is a well-healed wound ^[1]. Chronic wounds, by definition, are wounds that have failed to proceed through an orderly and timely reparative process to produce anatomic and functional integrity over a period of 3 months. These wounds are a significant challenge to the health care system and its professionals, with a huge economic burden ^[2]. The most common chronic wounds are leg ulcers ^[3].

Ulcer is defined as a break in the continuity of the surface epithelium- skin or mucous membrane ^[4]. Ulceration of the lower limb constitutes a major public health problem of great importance all over the world and contributes significantly to high morbidity and long-term disabilities. It is a stressful disease to those affected as well as their family and the community in general, and its impact on hospital resources is great due to prolonged hospitalization, high cost of health care, loss of productivity and reduced quality of life. Lower limb ulceration presenting late may end up being treated by limb amputation and is associated with increased risk of recurrence and malignant change. ^[5]

An ideal management plan for patients with lower limb ulcers should involve an early strategic and coordinated approach to deliver the correct treatment option for each individual patient, based on accurate assessment of the underlying pathophysiology ^[6].

The management of lower limb ulcers should include a detailed history of the onset of the problem, examination of the ulcer and the surrounding skin, investigations, and modalities of treatments. Successful management of leg ulcers requires a clear diagnosis, establishment of a treatment plan, accurate monitoring, and adherence to the plan as the ulcer decreases in size. Education and training is vital for all those involved in caring for patients with chronic ulceration.

Correspondence

Dr. Robindera Kour

In Charge Consultant Surgery,
Govt. Hospital Sarwal, Jammu,
Jammu and Kashmir, India

Hence the present study was conducted with aim to study clinical-demographic-etiological profile of the patients diagnosed with chronic leg ulcer.

Materials and Methods

The present Prospective clinical study was conducted among 50 patients of lower limb ulcers who attended Surgery OPD of Government Hospital Sarwal, Jammu, India.

Ethical approval and Informed consent

The study protocol was reviewed by the Ethical Committee of the Hospital and granted ethical clearance. After explaining the purpose and details of the study, a written informed consent was obtained.

Inclusion Criteria

1. All the patients more than eighteen years were included
2. Patients of both genders were included
3. Patients with co morbid conditions, hypertension, diabetes, immunocompromised status and history of trauma were also included

Exclusion Criteria

1. Patients less than 18 years
2. Patients who refused to give informed consent

Methodology

The selected cases were studied with respect to detailed history along with clinical examination and required investigations were done to reach the definitive diagnosis.

Statistical Analysis

The recorded data was compiled and entered in a spreadsheet computer program (Microsoft Excel 2010) and then exported to data editor page of SPSS version 19 (SPSS Inc., Chicago, Illinois, USA). Descriptive statistics included computation of percentages. The statistical tests applied for the analysis were Pearson's chi-square test (χ^2) and student t-test. For both the tests, confidence interval and p-value were set at 95% and ≤ 0.05 respectively.

Results

Table 1: Demographic profile of the study population

Age	N	%
<40	17	34
41-60	12	24
>60	21	42
Sex		
Female	9	18.0
Male	41	82.0
Occupation		
Farmer	21	42
Businessman	5	10
Daily Wage Worker	8	16
Housewife	9	18
Student	4	8
Employees	2	4
Unemployed	1	2
Total	50	100

Table 2: Distribution of ulcer type among study population

Ulcer Type	N	%
Diabetic Ulcer	17	34.0
Traumatic Ulcer	14	28.0
Venous Ulcer	10	20.0
Arterial Ulcer	2	4.0
Malignant Ulcer	4	8.0
Infective Ulcer	3	6.0
Total	50	100.0

Table 3: Distribution of associated systemic illnesses

Systemic illnesses	N	%
Diabetes Mellitus	24	48
Hypertension	13	26
Heart Diseases	10	20
Atherosclerosis	2	4
Tuberculosis	0	0
Leprosy	0	0

Table 4: Distribution of ulcer according to side of leg

Side	N	%
Right limb	31	62
Left limb	17	34
Bilateral	2	4
Total	50	100

Table 5: Association between ulcer type and location

Type of Ulcer	Gaiter Zone	Thigh	Leg	Foot	Multiple Sites	Total
Diabetic Ulcer	0	2	6	9	1	17
Traumatic Ulcer	0	1	5	4	4	14
Venous Ulcer	10	0	0	0	0	10
Arterial Ulcer	0	0	0	2	0	2
Malignant Ulcer	0	1	0	3	0	4
Infective Ulcer	0	1	0	0	2	3
Total	10	5	11	17	7	50

Discussion

Chronic Leg Ulcer is usually associated with significant morbidity, high cost of healthcare, loss of productivity, and reduced quality of life. In the present study was carried out to study the clinical-demographic-etiological profile 50 patients of lower limb ulcers who attended Surgery OPD of Government Hospital Sarwal, Jammu, India.

In our study most of the patients suffering from lower limb ulcers were of the age group 19-40 yrs (44%). Mbunda F *et al.* [7] also mentioned similar age incidence in their study.

In our study, incidence of lower limb ulcers was more common in males (82%) than females (18%). This result is comparable with study done by Naryana GL *et al.* [8] in which they found males (90.13%) to be more common than females (9.87%).

In our study, the most common type of lower limb ulcers were diabetic ulcers (34%). These results were comparable with study done by Bukkegar G *et al.* [9] and Naryana GL *et al.* [10], who also found diabetic ulcers as the most common type of lower limb ulcers accounting for 30% and 38.27% respectively.

In our study, lower limb ulcers were more commonly present over right limb in 31 patients (62%) than the left limb in 17 patients (34%). Rahman GA *et al.* [11] in their study also had similar observation with right limb involved more involvement seen more commonly than the left limb.

In our study, most common systemic disease associated with lower limb ulcerations was Diabetic Mellitus Type II accounting for 48% of cases. The study conducted by Mbunda F *et al.* [7] had comparable results with incidence of diabetes accounting for 59.3%. Diabetes Mellitus is associated with delayed cellular response to Injury, compromised cellular function at the site of injury and reduced wound tensile strength.

In the present study, venous ulcers were found to present at the Gaiter Area of the lower limb (100%) while arterial ulcers (100%) and diabetic ulcers (53.9%) were present predominately over the foot. This observation is supported by the Hansson C who had similar results in the study.

Conclusion

The present study concluded that the most common etiologies for chronic leg ulcer were diabetes mellitus and trauma. Patients involved in farming and those who belongs to >60 years of age group showed higher prevalence than others. Results of this study may benefit development of clinical management policies concerning chronic wounds.

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