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ORIGINAL ARTICLE

Assessment of clinical profile of chronic leg ulcers in adult population

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ABSTRACT:

Background: Chronic leg ulcers are the ulcers over the lower leg of more than 6 weeks duration. It represents a significant public health problem for both the patient and the health service provider. The present study was conducted to assess cases of chronic leg ulcers in adult population. **Materials & Methods:** 90 patients diagnosed with chronic leg ulcer of both genders were included. Etiology and clinical features in patients was recorded. **Results:** Age group 20-40 years had 15, 40-60 years had 30 and >60 years had 45 patients. The difference was significant (P< 0.05). Etiology of CLU was arterial in 20%, venous in 40%, mixed arterial & venous in 18%, due to leprosy in 12% and diabetic ulcer was 10%. The difference was significant (P< 0.05). Clinical findings was pigmentation in 35%, varicosity in 40%, oedema in 20%, muscle wasting in 65% and trophic change in12%. **Conclusion:** Most common reason of chronic leg ulcer was arterial followed by venous and mixed. Common clinical finding was pigmentation and varicosity.

Key words: chronic leg ulcer, diabetes, venous

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INTRODUCTION

Chronic leg ulcers are the ulcers over the lower leg of more than 6 weeks duration. It represents a significant public health problem for both the patient and the health service provider.[1] Leg ulcers have multiple etiologies (such as venous ulcer, ischemic or arterial ulcer, trophic ulcer) and many comorbid associations (obesity, smoking, prolonged standing). Thorough history taking, clinical examination, routine and specific investigations are important for proper diagnosis and management.[2]

Ulcers of skin can result in complete loss of the epidermis and often portions of the dermis and even subcutaneous fat.[3] Chronic ulceration of the lower legs is a relatively common condition amongst adults, and ulcer symptoms usually include increasing pain, friable granulation tissue, foul odor, and wound breakdown instead of healing. This results in social distress and considerable healthcare and personal costs.[4] Since numerous factors lead to lower leg ulceration, it is essential that health professionals adopt an interdisciplinary approach to the systematic assessment of the individual in order to ascertain the pathogenesis, a definitive diagnosis, and optimal treatment required. A correct diagnosis is essential to avoid inappropriate treatment that may delay wound healing, cause deterioration of the wound, or harm the patient.[5,6]

Pus or swab for culture and sensitivity, artery and venous Doppler study, Ankle Brachial Index (ABI) are important for accurate diagnosis and proper management of the condition. However, these are seldom done resulting in inappropriate use of antibiotics and failure to diagnose associated peripheral vascular disease in many patients.[7] The present study was conducted to assess cases of chronic leg ulcers in adult population.

MATERIALS & METHODS

The present study comprised of 90 patients diagnosed with chronic leg ulcer of both genders. Their enrolment in the study was commenced with their written approval.

Demographic profile of each patient was entered in case history performa. A thorough clinical examination, routine blood examinations, pus for culture and sensitivity test was performed. Ankle brachial index (ABI), and color doppler study of arterial and venous system of lower limbs was carried out. The criteria choosen to diagnose the different types of ulcers were clinical with special reference to the location, morphology, and presence or absence of pain, edema, or pigmentation. After recording all findings parameters were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Age wise patient distribution

Age group (Years)	Number	P value
20-40	15	0.02
40-60	30	
>60	45	

Table I shows that age group 20-40 years had 15, 40-60 years had 30 and >60 years had 45 patients. The difference was significant (P< 0.05).

Table II Etiology of leg ulcers

Etiology	Percentage	P value
Arterial	20%	0.02
Venous	40%	
Mixed arterial & venous	18%	
Due to leprosy	12%	
Diabetic ulcer	10%	

Table II, graph I shows that etiology of CLU was arterial in 20%, venous in 40%, mixed arterial & venous in 18%, due to leprosy in 12% and diabetic ulcer was 10%. The difference was significant (P< 0.05).

Graph I Etiology of leg ulcers

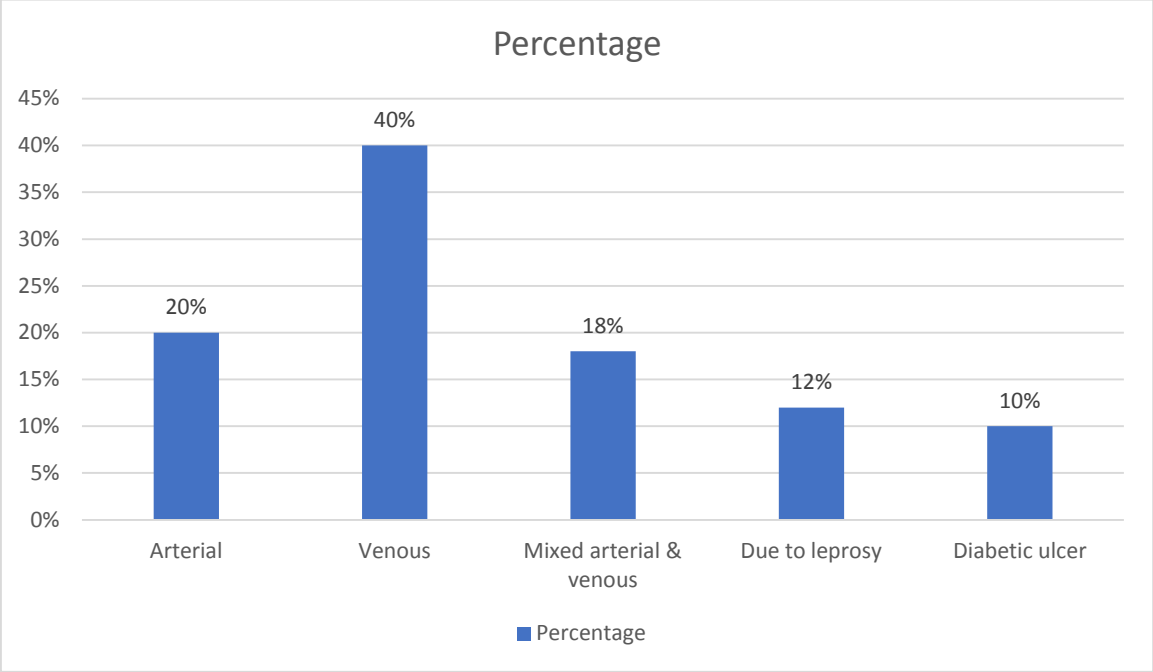
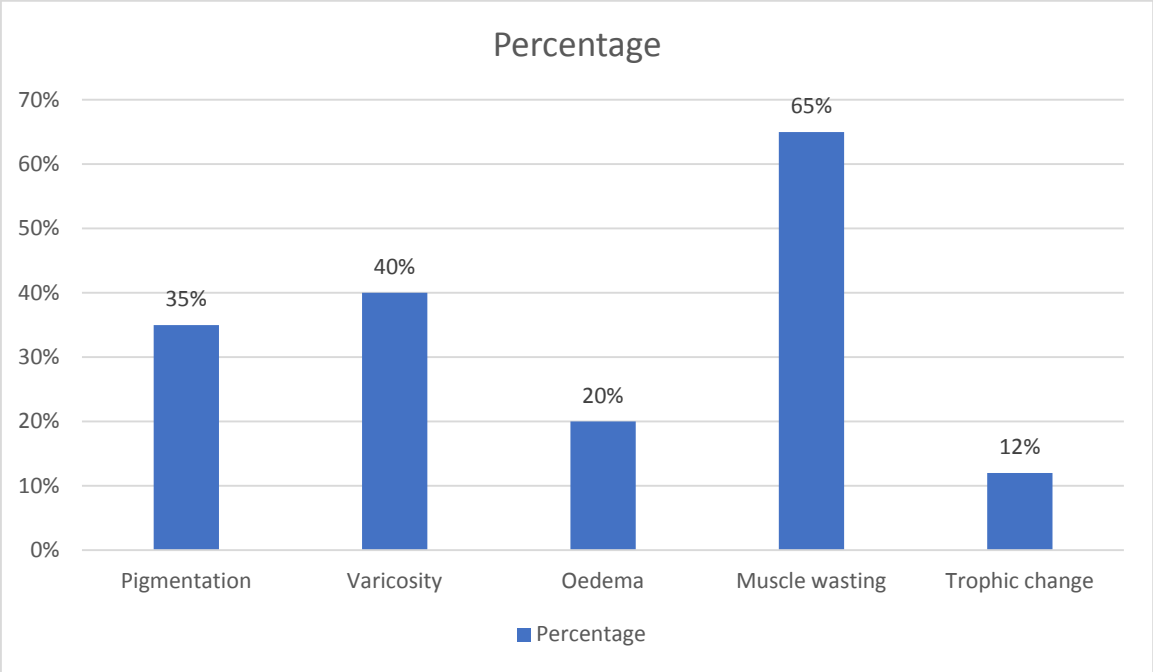


Table III Clinical findings in patients

Clinical findings	Percentage	P value
Pigmentation	35%	0.01
Varicosity	40%	
Oedema	20%	
Muscle wasting	65%	
Trophic change	12%	

Table III, graph II shows that clinical findings was pigmentation in 35%, varicosity in 40%, oedema in 20%, muscle wasting in 65% and trophic change in 12%.

Graph II Clinical findings in patients



DISCUSSION

Chronic leg ulcer (CLU) also known as chronic lower limb ulcer is a chronic wound of the leg that shows no tendency to heal after 3 months of appropriate treatment or is still not fully healed at 12 months.[8] The incidence of ulceration is rising as a result of the ageing population and increased risk factors for atherosclerotic occlusion such as smoking, obesity, and diabetes. Ulcers can be defined as wounds with a "full thickness depth" and a "slow healing tendency".[9] CLU is reported to have impact on virtually every aspect of daily life: pain is common, sleep is often impaired, mobility and work capacity tend to be restricted, and personal finances are often adversely affected. It is also known that social activities are restricted due to fear of injury and negative body image. CLU is usually associated with significant morbidity, high cost of healthcare, loss of productivity, and reduced quality of life.[10] It was shown in various studies that racial, familial, occupational, and social factors may have an impact on the prevalence of different causes of leg ulcers. Though there are western data on the epidemiology of leg ulcer, similar data are largely lacking from our part of the world.[11] The present study was conducted to assess cases of chronic leg ulcers in adult population.

In present study, age group 20-40 years had 15, 40-60 years had 30 and >60 years had 45 patients. Karen R Lorimer et al[12] observed that the Regional Prevalence and Profile Study identified 263 people with leg ulcers for a rate of 2.0 per 1,000 people >25 years of age. One hundred, seven ulcers (41%) were the result of venous disease; of these, 83 (78% of cases) were associated with a single nursing agency and formed the study cohort. Most patients (51, 61%) were female and 65 years old. Thirty-eight (46%) had 4 comorbid conditions, 63 spoke English, 29 lived alone, 38 did not require physical aids or assistance for mobility, and 81 (98%) were able to travel outside of their home. The current ulcer had been present for an average of 15 months (median 6 months), 51 participants had a previous leg ulcer, and 22 had episodes of ulceration for > 5 years. Of the 121 ulcers in the study, 48 (41%) were located at the ankle, and the majority (85%) were > 1 cm2. General practitioners were the main medical care providers for 48 participants, and 52 (62%) had seen a specialist physician for their current ulcer. These findings are similar to large studies conducted in other industrialized countries and confirm that venous ulcers are a chronic problem in a population with complex health needs.

We found that etiology of CLU was arterial in 20%, venous in 40%, mixed arterial & venous in 18%, due to leprosy in 12% and diabetic ulcer was 10%. It has been reported that ulcers related to venous insufficiency constitute 70%, arterial disease 10%, and ulcers of mixed etiology 15% of leg ulcer presentations. The remaining 5% of leg ulcers result from less common pathophysiological causes, and this latter group comprise considerable challenges in diagnosis, assessment, and management. In the Western world, leg ulcers are mainly caused by venous insufficiency, arterial insufficiency, neuropathy, diabetes, or a combination of these factors. Venous ulcers are the most common type of leg ulcers, accounting for approximately 70% of cases. Arterial disease accounts for another 5% to 10% of leg ulcers; most of the others are due to either neuropathy (usually diabetic) or a combination of those diseases.[13]

We observed that clinical findings was pigmentation in 35%, varicosity in 40%, oedema in 20%, muscle wasting in 65% and trophic change in 12%. The basic principles of treatment are to remove or treat precipitating cause, for example, surgical intervention, to promote circulation and improve venous return, for example, compression therapy, to promote healing, for example, wound care, lifestyle changes, symptom management, and to promote preventative care, for example, health education, current treatments for CLU include surgery, sclerotherapy, compressive therapy (conventional therapy), and adjuvant pharmacotherapy. Vowden[14] has outlined four basic therapeutic strategies that can be employed singularly or in combination to enhance healing and improve outcomes when surgical intervention is not an option. He has also discussed neurovascular interventions such as lumbar sympathectomy or spinal cord stimulation; systemic therapy with hyperbaric oxygen or intervenous therapy with agents such as prostaglandins; local mechanical therapy such as negative pressure wound therapy.

CONCLUSION

Authors found that most common reason of chronic leg ulcer was arterial followed by venous and mixed. Common clinical finding was pigmentation and varicosity.

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