ORIGINAL RESEARCH

Evaluation of cases of chronic leg ulcers

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ABSTRACT
Background: Lower leg ulcers that last longer than six weeks are referred to as chronic leg ulcers. For both the patient and the healthcare professional, it is a serious public health issue. The present study was conducted to assess cases of chronic leg ulcers. **Materials & Methods:** 105 patients with chronic leg ulcer of both genders were recruited. The lower extremities' arterial and venous systems were studied using color doppler imaging and the ankle brachial index (ABI). **Results:** Age group 21-40 years had 12 males and 7 females, 41-60 years had 16 males and 20 females and >60 years had 32 males and 28 females. Etiology of CLU was arterial in 24%, venous in 36%, mixed arterial & venous in 20%, due to leprosy in 14% and diabetic ulcer was 6%. Clinical findings were pigmentation in 37%, varicosity in 42%, oedema in 27%, muscle wasting in 62% and trophic change in 14%. Microorganisms were Staphylococcus aureus in 56%, Pseudomonas aeruginosa in 40%, E. coli in 2% and Acinetobacter baumannii in 2% cases. **Conclusion:** The most frequent causes of persistent leg ulcers were venous, arterial, and mixed. Pigmentation, muscle wasting and varicosity were common clinical findings.
Key words: chronic leg ulcer, pigmentation, varicosity

INTRODUCTION

Lower leg ulcers that last longer than six weeks are referred to as chronic leg ulcers. For both the patient and the healthcare professional, it is a serious public health issue.[1] Leg ulcers have several causes, including ischemic or arterial ulcers, trophic ulcers, and venous ulcers, as well as other comorbidities, including smoking, obesity, and extended standing. For the right diagnosis and treatment, a comprehensive history, clinical examination, and regular and targeted investigations are essential.[2]

Complete loss of the epidermis, as well as frequently parts of the dermis and even subcutaneous fat, can occur from skin ulcers.[3] Adults who have chronic lower leg ulcers are comparatively likely to experience growing discomfort, friable granulation tissue, bad odor, and wound collapse rather than healing. This leads to social distress and considerable healthcare and personal costs.[4]

Since there are many contributing causes to lower leg ulcers, health care providers must use an interdisciplinary approach to the patient's systematic evaluation to determine the pathophysiology, a conclusive diagnosis, and the best course of action. A proper diagnosis is necessary to prevent improper therapy that could injure the patient, delay wound healing, or worsen the condition.[5] Accurate diagnosis and appropriate treatment of the illness depend on the Ankle Brachial Index (ABI), artery and venous Doppler studies, and a pus or swab for culture and sensitivity. But because they are rarely carried out, many patients may not receive the proper diagnosis of peripheral vascular disease and antibiotics are used inappropriately.[6]The present study was conducted to assess cases of chronic leg ulcers.

MATERIALS & METHODS

The present study comprised of 105 patients with chronic leg ulcer of both genders. All gave their written approval for participation in the study.

Each patient's demographic information was input into the case history performa. Regular blood tests, a comprehensive clinical examination, pus culture, and sensitivity testing were all carried out. The lower extremities' arterial and venous systems were studied using color doppler imaging and the ankle brachial index (ABI). Clinical criteria, particularly those pertaining to location, form, and the presence or absence of pain, edema, or pigmentation, were used to diagnose the various types of ulcers. Results were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Patient distribution

Age group (Years)	Male (60)	Female (55)
21-40	12	7
41-60	16	20
>60	32	28

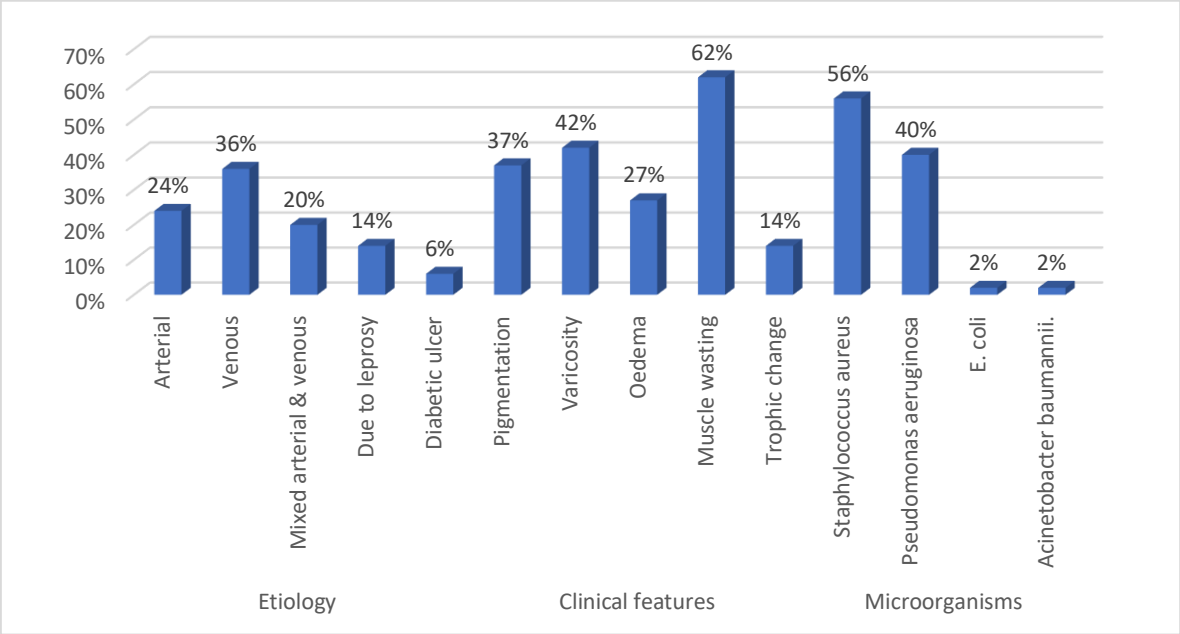
Table I shows that age group 21-40 years had 12 males and 7 females, 41-60 years had 16 males and 20 females and>60 years had 32 males and 28 females.

Table II Assessment of parameters

Parameters	Variables	Percentage	P value
Etiology	Arterial	24%	0.05
	Venous	36%	
	Mixed arterial & venous	20%	
	Due to leprosy	14%	
	Diabetic ulcer	6%	
Clinical features	Pigmentation	37%	0.83
	Varicosity	42%	
	Oedema	27%	
	Muscle wasting	62%	
	Trophic change	14%	
Microorganisms	Staphylococcus aureus	56%	0.01
	Pseudomonas aeruginosa	40%	
	E. coli	2%	
	Acinetobacter baumannii.	2%	

Table II, graph I shows that etiology of CLU was arterial in 24%, venous in 36%, mixed arterial & venous in 20%, due to leprosy in 14% and diabetic ulcer was 6%. Clinical findings were pigmentation in 37%, varicosity in 42%, oedema in 27%, muscle wasting in 62% and trophic change in 14%. Microorganisms were Staphylococcus aureus in 56%, Pseudomonas aeruginosa in 40%, E. coli in 2% and Acinetobacter baumannii in 2% cases.

Graph I Assessment of parameters



DISCUSSION

Chronic leg ulcers (CLUs), sometimes called chronic lower limb ulcers, are persistent wounds on the leg that either do not heal at all after three months of appropriate therapy or do not heal completely after twelve months.[7] The aging of the population and the rise in atherosclerotic occlusion risk factors such diabetes, obesity, and smoking are contributing to an increase in the incidence of ulceration.[8] Wounds with a "full thickness depth" and a "slow healing tendency" are referred to as ulcers. According to reports, CLU affects almost every element of everyday life: pain is

frequent, sleep is frequently disrupted, mobility and work capacity are frequently limited, and personal finances are frequently negatively impacted.[9] Additionally, social activities are known to be limiteddue to fear of injury and negative body image.Significant morbidity, high medical expenses, lost productivity, and a lower quality of life are typically linked to CLU.[10] Numerous researches have demonstrated that the prevalence of various leg ulcer causes may be influenced by racial, familial, occupational, and societal factors. Although there exist data on the epidemiology of leg ulcers from the West, our region of the world mainly lacks comparable data.[11,12]The present study was conducted to assess cases of chronic leg ulcers.

We observed that age group 21-40 years had 12 males and 7 females, 41-60 years had 16 males and 20 females and >60 years had 32 males and 28 females. When surgery is not an option, Vowden[13] has described four fundamental treatment approaches that can be used separately or in combination to promote recovery and improve results. Additionally, he has talked about local mechanical therapy like negative pressure wound therapy, systemic therapy with hyperbaric oxygen or intervenous therapy with drugs like prostaglandins, and neurovascular procedures like spinal cord stimulation or lumbar sympathectomy.

We found that etiology of CLU was arterial in 24%, venous in 36%, mixed arterial & venous in 20%, due to leprosy in 14% and diabetic ulcerwas 6%. Clinical findings were pigmentation in 37%, varicosity in 42%, oedema in 27%, muscle wasting in 62% and trophic changein 14%. Microorganisms were Staphylococcus aureus in 56%, Pseudomonas aeruginosa in 40%, E. coli in 2% and Acinetobacter baumannii in 2% cases. Margolisa et al[14]estimated the prevalence and incidence of venous leg ulcers in the elderly.The positive predictive value of our ascertainment strategy was 98.3% (95% confidence interval [CI], 90.0, 100.0). The annual prevalence of venous leg ulcer among the elderly was 1.69 (95% CI, 1.65, 1.74). The overall incidence rate was 0.76 (95% CI, 0.71, 0.83) for men and 1.42 (1.35, 1.48) per 100 person-years for women.

Fowkes et al[15] revealed that the prevalence increases with age but the incidence of new cases appears to be constant throughout adult life. Open venous ulcers occur in about 0.3% of the adult population and a history of open or healed ulceration occurs in around 1%. The etiology of chronic venous disease in the legs is unknown. A genetic predisposition may be present but evidence for this and for a mode of inheritance is lacking. There is some suggestion that prolonged standing may be a risk factor but studies are open to considerable bias. In women, obesity and previous pregnancy has been associated with the presence of varicose veins but the evidence is inconsistent. There have been few well-conducted studies examining diet and bowel habit as a risk factor. The risk of ulceration is related to the severity of varicosities and venous insufficiency, and is increased following deep vein thrombosis.

CONCLUSION

Authors found that the most frequent causes of persistent leg ulcers were venous, arterial, and mixed. Pigmentation, muscle wasting and varicosity were common clinical findings.

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