

Case Report

A RARE CASE OF ATYPICAL SITE OF VENOUS ULCER

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ABSTRACT

An Ulcer is defined as a breach in the continuity of the covering epithelium of either skin or mucous membrane with microscopic death of tissue. Chronic leg ulcer (CLU) (Agale, 2013) is defined that the 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. The annual incidence of leg ulcer in the UK and Switzerland are 3.5 and 0.2 per 1000 individuals (Kahle *et al.*, 2011), respectively. There are few Indian studies on the epidemiology of chronic wounds; one study estimated the prevalence at 4.5 per 1000 population. The incidence of acute wounds was more than double at 10.5 per 1000 population (Van-Gent *et al.*, 2010). The chronic venous insufficiency leading the most common cause for lower limb ulceration of 70% among the causes of which gaiter area ulcer with a 90%. It means an ulcer occurring the area above the lateral malleolus is not so common. So we report a case of 52 year old female treated outside for more than one year period as diabetic ulcer but we made the diagnosis of atypical venous ulcer. After Duplex of right lower limb and basic investigations did the right SFJ ligation and multiple phlebectomies. After six weeks period the ulcer healed completely. It is being presented for its rarity.

Keywords: *Venous Ulcer, Lower Limb, Atypical Site*

INTRODUCTION

Chronic leg ulcer (CLU) is defined that the 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. The annual incidence of leg ulcer in the UK and Switzerland are 3.5 and 0.2 per 1000 individuals, respectively. There are few Indian studies on the epidemiology of chronic wounds; one study estimated the prevalence at 4.5 per 1000 population. The incidence of acute wounds was more than double at 10.5 per 1000 population. The chronic venous insufficiency leading the most common cause for lower limb ulceration of 70% among the causes of which gaiter area ulcer with a 90%. It means an ulcer occurring the area above the lateral malleolus is not so common. So we presented this case of atypical site of venous ulcer and discuss the management of the same.

CASES

A 52 year old female presented to the surgical OPD with the complaints of non healing ulcer of one year duration associated with serosanguineous discharge of moderate quantity of the same duration. She had occasional pain of dull aching nature of six months duration. She had treated outside as an ulcer due to diabetes for a year period. But her wound did not heal. She was a known diabetic and hypertensive on regular treatment.

On examination an ulcer of size; 7x6 cms located in right lateral side of leg with sloping edge and regular margin with floor covered by granulation tissue and hyper pigmented surrounding tissues. The ulcer was with initially sero sanguineous discharge later on serous discharge. Few dilated, tortuous veins noted in the mid thigh. All basic investigations were within normal limits. The Duplex study of right lower limb showed SFJ, Perforator incompetence (Figure 1.1).

So we provided the conservative line of treatment by making the ulcer from non healing stage in to healing stage. Then the definitive procedure carried out that was right SFJ Flush ligation and multiple phlebectomies the post operative period was uneventful. The patient was on regular follow up and the ulcer would almost completely healed stage (Figure 1.2) & (Figure 1.3).



Figure 1.1: Duplex image shows the SFJ and Perforator incompetence



Figure 1.2: Shows the healing stage of the atypical site ulcer

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Figure 1.3: Shows normal Gaiter area of right lower limb(Gaiter Area – most common site of venous ulcer)

DISCUSSION

An Ulcer is defined as a breach in the continuity of the covering epithelium of either skin or mucous membrane with microscopic death of tissue. Chronic leg ulcer (CLU) (Agale, 2013) is defined that the 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.

The annual incidence of leg ulcer in the UK and Switzerland are 3.5 and 0.2 per 1000 individuals (Kahle *et al.*, 2011), respectively. There are few Indian studies on the epidemiology of chronic wounds; one study estimated the prevalence at 4.5 per 1000 population. The incidence of acute wounds was more than double at 10.5 per 1000 population.

The chronic venous insufficiency leading the most common cause for lower limb ulceration of 70% among the causes of which gaiter area ulcer with a 90% (Van-Gent *et al.*, 2010). It means an ulcer occurring the area above the lateral malleolus is not so common. Risk factors for development of VLUs include older age, female sex, obesity, trauma, and immobility, congenital absence of veins, deep vein thrombosis (DVT), phlebitis, and factor V Leiden mutation.

The following are the Poor prognostic factors (González-Consuegra and Verdú, 2011). a) Duration of more than 1 year - recurrence rate in these ulcers is more than 70%. b) Larger wounds. c) Fibrin in >50% of wound surface. c) Ankle-brachial pressure index (ABPI) <0.8 .d) History of venous stripping/ligation. Chronic venous leg ulcer results in reduced mobility, significant financial implications, and poor quality of life.

There are no uniform guidelines for assessment and management of this group of conditions, which is reaching epidemic proportions in the prevalence.

There is a wide variation in healing and recurrence rates of these ulcers (Sasanka, 2012) in the Indian population due to differing nutritional status, availability of medical facilities and trained medical staff to diagnose and manage such conditions.

These guidelines are devised based on current available evidence to help all concerned in accurately assessing, correctly investigating and also providing appropriate treatment for this condition.

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Pathophysiology (Amir et al., 2012)

Venous Hypertension (Nelson and Pretorius, 1988; Polack and Culter, 1989; Foley and Middleton, 1989; Lunt, 1999)

Deep vein thrombosis, perforator insufficiency, superficial and deep vein insufficiencies, arteriovenous fistulas and calf muscle pump insufficiencies lead to increased pressure in the distal veins of the leg and finally venous hypertension.

Fibrin Cuff Theory (Persson and Jones, 1989; Rachel and Andrew, 2006)

Fibrin gets excessively deposited around capillary beds leading to elevated intravascular pressure. This causes enlargement of endothelial pores resulting in further increased fibrinogen deposition in the interstitium. The "fibrin cuff" which surrounds the capillaries in the dermis decreases oxygen permeability 20-fold. This permeability barrier inhibits diffusion of oxygen and other nutrients, leading to tissue hypoxia causing impaired wound healing.

Inflammatory Trap Theory (Mercer et al., 1998; Shepherd, 1995)

Various growth factors and inflammatory cells, which get trapped in the fibrin cuff, promote severe uncontrolled inflammation in surrounding tissue preventing proper regeneration of wounds. Leukocytes get trapped in capillaries, releasing proteolytic enzymes and reactive oxygen metabolites, which cause endothelial damage. These injured capillaries become increasingly permeable to various macromolecules, accentuating fibrin deposition. Occlusion by leukocytes also causes local ischemia thereby increasing tissue hypoxia and reperfusion damage.

Dysregulation of various Cytokines (Magnusson, 1995)

Dysregulation of various pro-inflammatory cytokines and growth factors like tumor necrosis factor- α (TNF- α), TGF- β and matrix metalloproteinases lead to chronicity of the ulcers

Miscellaneous

Thrombophilic conditions like factor V Leiden mutation, prothrombin mutations, deficiency of antithrombin, presence of antiphospholipid antibodies, protein C and S deficiencies and hyperhomocysteinemia are also implicated. Pentoxifylline, micronised purified flavanoid fraction-Daflon 500 mg and prostaglandin E1 analogue are the drugs used due to their action on leucocyte metabolism. The drugs are most effective when used in conjunction with compression. Many evidence-based studies conclude that compression increases ulcer healing rates compared with no compression. Multi-component systems are more effective than single-component systems. Multi-component systems containing an elastic bandage appear more effective than those composed mainly of inelastic constituents. It has been shown that more than 85% of patients with leg ulcer have reflux in superficial veins and therefore are candidates for intervention.

Conclusion

The majority of chronic leg ulcers are caused by venous insufficiency followed by arterial ulcers. So The CVI should also be considered in the lateral side leg ulcers. The approach must be a multidisciplinary type. Educating patients on issues of correct foot care. Importance of seeking early medical advice. The case is presented for its rarity.

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