

Retrospective analysis of leg ulcers cases at the university hospital, Faculty of Medicine of Ribeirão Preto, University of São Paulo (1991-2001)

Análise retrospectiva dos casos de úlceras de perna do hospital das clínicas da Faculdade de Medicina de Ribeirão Preto da Universidade de São Paulo (1991-2001)

FM Barbetta, EL Mazzucato, AM Salathiel, NT Foss, MAC Frade

From the Dermatology Division of the Department of Internal Medicine. Faculty of Medicine of Ribeirão Preto. University of São Paulo. Ribeirão Preto. SP. Brazil.

Correspondence:

Marco Andrey Cipriani Frade
Divisão de Dermatologia
Av. Bandeirantes, 3900 - Monte Alegre - Ribeirão Preto - SP
CEP: 14.049.900
Fax/Fone: 55-16-36330236
e-mail: mandrey@fmrp.usp.br

Summary

Introduction: Leg ulcers are a syndrome characterized by loss of tegument that affect the lower extremities usually caused by vascular system dysfunction, representing a high morbidity chronic disease especially among the aged. This study determined the epidemiological characteristics of leg ulcer patients seen at Clinical Hospital Ribeirão Preto from 1991 to 2001, and their main etiologies and the resolving nature of the treatments applied were investigated.

Method: This was a descriptive retrospective study (case series) analyzing 199 medical records of leg ulcer patients, coded by the Medical Records from 1991 to 2001.

Results: 51% of the patients were women and 49% men, with respective median ages of 65 and 66 years, and 81% were white. Etiologically, 49% were classified as venous ulcers, 15% arterial, 9% neuropathic, 2% anemic, and 20% were not classified. Approximately 40% of the patients had been wounded for more than 1 year, 13% died, 40% discharged, and 45% evolved with chronic disease. Among the discharged patients, 64% of those with arterial ulcers and 80% of those with neurotrophic ulcers underwent amputation of the segment involved. Regarding venous ulcers, only 37% of the patients were discharged, after local dressing in 56% of cases and after skin graft in only one.

Comment: Leg ulcer disease was found to be an important chronic disease among the patients seen at the Clinical Hospital Ribeirão Preto from 1991 to 2001, with severe consequences regarding the arterial and neurotrophic ulcers, although the etiologic diagnosis was unknown or neglected in 20.1% of the cases.

(FM Barbetta, EL Mazzucato, AM Salathiel, NT Foss, MAC Frade. Retrospective analysis of leg ulcers cases at the university hospital, Faculty of Medicine of Ribeirão Preto, University of São Paulo (1991-2001). Med Cutan Iber Lat Am 2009;37(1):28-32)

Key words: leg ulcers, retrospective study.

Resumo

Introdução: Úlcera de perna é uma síndrome caracterizada por perda circunscrita ou irregular do tegumento, que acomete extremidades dos membros inferiores cuja causa geralmente está na disfunção do sistema vascular. Doença crônica de alta morbidade principalmente na população idosa. O estudo busca características epidemiológicas dos pacientes com úlceras de perna atendidos no Hospital das Clínicas de Ribeirão Preto, de 1991 a 2001, conhecer suas principais etiologias e a resolubilidade dos tratamentos realizados.

Metodologia: Estudo descritivo e retrospectivo (série de casos), da análise de 199 prontuários médicos dos pacientes com úlceras de perna, codificados pelo Arquivo Médico, de 1991 a 2001.

Resultados: 51% dos pacientes eram do sexo feminino, 49% masculino, medianas de idade de 65 e 66 anos respectivamente, e 81% brancos. Etiologicamente, 49% foram úlceras classificadas como venosas, 15% arteriais, 9% neuropáticas, 2% anêmicas e 20% sem classificação. Aproximadamente 40% apresentavam a doença por mais de 1 ano, 13% evoluíram para óbito, 40% para alta ambulatorial e 45% para cronicidade da doença. Dentre os pacientes com alta, 64% dos casos de úlceras arteriais e 80% das neurotróficas sofreram amputação do segmento acometido. Quanto às venosas, apenas 37% dos pacientes obtiveram alta, sendo 56% por curativos locais e somente 1 caso por enxertia cutânea.

Conclusões: A doença úlcera de perna foi uma enfermidade crônica importante, principalmente as venosas, dentre os pacientes atendidos no Hospital das Clínicas de Ribeirão Preto de 1991 a 2001, com repercussões graves como as arteriais e neurotróficas, apesar do diagnóstico etiológico negligenciado/desconhecido em 20,1% dos casos.

Palavras chave: úlcera de perna, estudo retrospectivo.

Leg ulcers are a syndrome characterized by the circumscribed or irregular loss of tegument (dermis or epidermis) that may reach subcutaneous tissue and underlying tissues. The disease involves the lower extremities and the cause usually is related to some dysfunction of the arterial or venous vascular system.[1] The classification may be based on etiology and therefore leg ulcers are divided into those due to venous insufficiency (venous ulcers), to arterial insufficiency (arterial ulcers), to neuropathy (neuropathic ulcer/diabetic foot), to red blood cell abnormalities (anemic ulcers), to obliterating thromboangiitis, as well as those due to causes such as trauma, neoplasia, infections, panniculitis, and pyoderma gangrenosum.[1-4] Among the main predisposing factors are age (elderly individuals), sex (females), obesity, profession (prolonged standing up), vulnerability of the legs to traumas and infections, increased venous pressure, reduced arterial flow, and a family history.[1,6]

Venous ulcers present characteristic signs such as evening ankle edema and red-brown spots due to pigmentation generated by red blood cell extravasation and later transformation of hemoglobin to hemosiderin (hypostatic purpura). Eczema, cellulitis and streptococcal infection may be associated with the signs and symptoms. Ulceration frequently arises after an initial trauma. The habitual localization is in the lower third and inner surface of the leg, in the supramalleolar region. Usually there is a single ulcer that progresses slowly, representing an ulcer of variable shape and size. At first it presents irregular borders and a hemorrhagic or purulent fundus, but with time the borders become callous and adhere to underlying tissues. Leishmaniasis, sporotrichosis, neoplasias, syphilis and tuberculosis should be excluded in the differential diagnosis. The possibility of stasis should be considered as a factor contributing to the picture involved in these affections.

Leg or foot ulcers occurring in elderly individuals, often diabetic and/or hypertensive, may be fundamentally triggered by cutaneous ischemia depending on truncular arterial lesions. This usually occurs after a traumatic injury. The ulcers are irregular, with pallor, absence of sta-

sis, delayed color after elevation of the limb, reduction or absence of pulsation in the foot arteries, and pain of variable intensity. Some diabetics have degenerative arteriocardillary disease, which leads to the formation of ischemic ulcers in the skin of the lower limbs. These ulcers are deep, painful and non-edematous, and are preferentially located in the lower third of the leg, on the lateral surface or on the malleoli.[7]

Ulcers of neuropathic origin are chronic and occur in an area of anesthesia due to trauma or pressure. Anemic ulcers usually occur in young Black women, are located in the lower third of the leg, present nonspecific characteristics and are diagnosed on the basis of the absence of signs of stasis and of blood count findings (sickle-cell erythrocytes).[7]

The University Hospital of the Faculty of Medicine of Ribeirão Preto, University of São Paulo, is a tertiary reference hospital serving the population of the macro region of Ribeirão Preto, which consists of 80 municipalities with approximately 3 million inhabitants according to the 2000 IBGE Census.

The objective of the present study was to describe the clinical and epidemiological characteristics of patients with leg ulcers seen at HCFMRP-USP during the period from 1991 to 2001, and to determine the main etiologies, the possibility of resolution and the treatments performed.

Material and methods

The authors analyzed 199 medical records of the patients with lower limb ulcers as the main diagnosis or associated with other major diseases coded in the list of problems of the Medical Records Service (SAME) of HCFMRP-USP, attended during the period from 1991 to 2001. The following data were collected: first and last year of treatment, etiologic diagnosis of the leg ulcer, demographic data (sex, color, marital status, origin), age, discharge condition (death, ulcer resolution or active ulcer requiring ambulatory follow-up), and treatment (amputation of the limb, skin graft, dressings or vascular surgery).

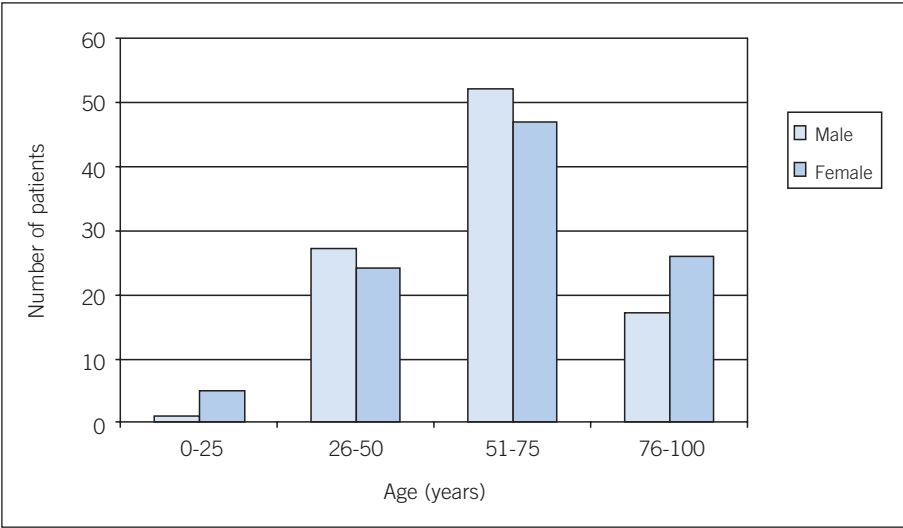


Figure 1. Patient age range (years), HCFMRP-USP, 1991-2001.

Results

The median age of the 199 patients whose records were evaluated was 65 years for women and 66 years for men (range: 12-92 years). Distribution by age range and sex is presented in Figure 1. Other demographic data for the sample studied are listed in Table 1. The etiologies of the ulcers are illustrated in Figure 2.

Data regarding time of ulcer evolution and the possibility of resolution are listed in Table 2, and the treatments used related to etiologic classification are listed in Table 3.

Table 1. Data of the patients with leg ulcers seen at HCFMRP-USP during the period from 1991 to 2001.

Demographic data		n	%
Sex	Male	98	49
	Female	101	51
Color	White	163	82
	Non-white	36	18
Marital status	Married	121	61
	Single	40	20
	Divorced	6	3
	Widowed	32	16
Origin	Ribeirão Preto	111	56
	Other towns in the RP region	82	41
	Other States	6	3
Total		199	100

n = number of patients.

Comment

Little information is currently available in the literature about leg ulcers, including countries like Brazil, especially regarding prevalence and epidemiology.[5] Callam et al.[4] estimated that approximately 1% of the world population presents chronic leg ulceration in some phase of life. However, this, as well as other information about the epidemiology of leg ulcers is probably underestimated when the general population is considered, since many cases are not reported or are not correctly followed and documented by a single integrated service, but are handled by different specialties in almost all sectors of health services.[5,8]

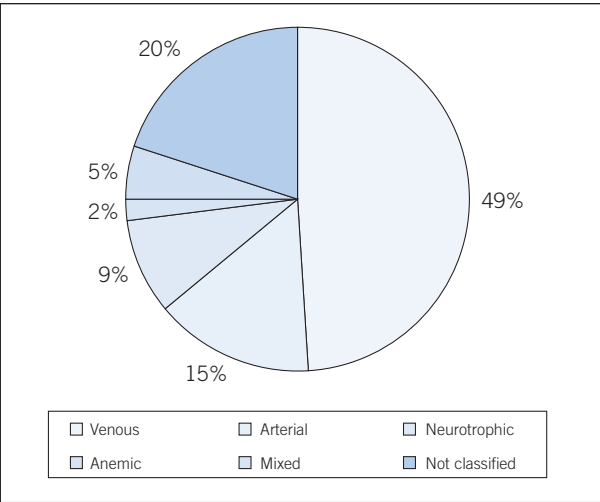


Figure 1. Etiologic classification of leg ulcers, HCFMRP-USP, 1991-2001.

Table 2. Resolution and follow-up time of patients with leg ulcers seen at HCFMRP-USP during the period from 1991 to 2001.

Clinical course	< 1 m		1 m - 1 y		1 a 5 y		> 5 y		Total	
	n	%	n	%	n	%	n	%	n	%
1. Death	11	42	10	38	3	12	2	8	26	13
2. Discharge from the service	15	19	34	44	27	34	2	3	78	39
3. Active ulcer	10	16	31	35	29	32	20	16	90	45
4. Only one visit	–	–	–	–	–	–	–	–	5	3
Total	36	21	75	39	59	30	24	10	199	100

n = number of patients; m = month; y = year.

A longitudinal study carried out in the United States in 2001 reported that leg ulcers due to phlebopathy occur in approximately 18/100,000 Americans each year.[7,9] With the increased life expectancy of the population, this problem has become even more relevant[7-9] because of its chronic nature, cost of treatment and severe complications such as amputations and malignancies.

In the present study, venous ulcers were the most frequent (49%) although their frequency was lower than that reported in the literature (80-90%), arterial ulcers affected 5 to 10% of patients, and the remaining cases were of neuropathic or mixed origin.[5] However, recent studies have indicated a slight increase in the frequency of arterial or associated ulcers, perhaps due to the current changes in age distribution in the population and to the improved diagnostic techniques for the detection of arterial disease,[5] with a consequent decrease in the frequency of venous ulcers. In addition, the high index of unclassified ulcers should be

pointed out, a fact that also corroborates the low index of venous ulcers. Neurotrophic ulcers (9%) were also frequent in the present study. The high frequency of patients coming from other towns in the Ribeirão Preto region may be explained by the fact that these were more serious cases inadequately treated in the municipalities of origin. Regarding the age ranges, there was a predominance of elderly patients, with 55% of the subjects being older than 61 years.

Among the patients who died, 42% died within the first month of follow-up at the hospital, while 80% died within one year of follow-up. These were mainly patients in serious condition whose had been admitted due to another cause, with a secondary diagnosis of leg ulcers and with a consequent inadequate investigation and etiologic definition of the condition.

Of all the patients with venous ulcers studied here, only 37% were discharged from the service, with 56% of them being treated only with local dressings. Only one patient was

Table 3. Treatments applied according to etiologic type of ulcer to the patients who were discharged from HCFMRP-USP during the period from 1991 to 2001.

Etiology	AM		SG		HD		VS		Discharge		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Venous	2	6	1	3	20	56	13	36	36	37	97	49
Arterial	13	64	3	14	5	23	–	–	21	73	29	15
Neurotrophic	4	80	1	20	–	–	–	–	5	28	18	9
Anemic					1	100			1	20	5	2
Mixed	1	25	–	–	3	75	–	–	4	40	10	5
Not classified	4	33	4	33	3	33	–	–	11	28	40	20
Total No. of patients	24	31	9	11	32	41	13	17	78	39	199	100

n = number of patients.

AM = amputation; SG = skin graft; HD = healing with dressings; VS = vascular surgery; Discharge = number of patients who were discharged from the Hospital.

submitted to a skin graft, a treatment performed in only 4.5% of the present cases of leg ulcers although it could accelerate the discharge of these patients, thus increasing the resolution of these cases in a tertiary level hospital.

A large number of amputations was observed among the patients with ulcers of arterial and neurotrophic etiology (64% and 80%, respectively), with respective discharge rates of 73% and 28%. These data show a reserved prognosis for the patients with arterial ulcers admitted to HCFMRP-USP who required amputations followed by discharge, whereas the neurotrophic ulcers presented a more chronic course, as shown by the higher percentage of amputations and the low rate of discharge.

The present results show that lower limb ulcers, especially venous ones, represented an important chronic disease among the patients seen at HCFMRP-USP during the period from 1991 to 2001, involving a population of elderly individuals and often causing serious consequences such as arterial and neurotrophic ones, although their etiologic diagnosis had been neglected or was unknown in 20.1% of cases. Finally, it is clear that there is the need for a better interaction among medical specialties for the care of patients with leg ulcers which should be of a multidisciplinary type, with a significant improvement in care regarding the diagnosis, treatment and re-adaptation of these patients.

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