Leg ulcers past and present

"HISTORY is bunk", said Henry Ford. While this may be at least a debatable proposition in the field of motorcar manufacture, it is totally indefensible in medicine. Each generation of doctors has to relearn the lessons of its predecessors and our past has much to teach us that is relevant to our present practice. If we ignore our history, these lessons will be painful. Unfortunately for our patients, while we do the learning they suffer the pains; we hope that Loudon's paper (pages 263-273) will help avoid this problem with leg ulcers.

To study the changing pattern of any condition over the years is not just an academic exercise; time and time again, these changes highlight constant factors, so that it is possible to delineate those which are integral to the basic condition and those which are the result of influences relevant only to the particular time.

In no field of medicine is this rule better illustrated than in that of ulceration of the leg. We are used to regarding ulcerated leg as a condition of the elderly and of the female. Yet, in the eighteenth and nineteenth centuries, not only was it much more common than at present, it was very much a condition of males rather than females and of young adults rather than their elders. By the early twentieth century, while the incidence had become markedly less, a complete reversal of both age and sex ratios had also occurred; leg ulceration was now a condition of women rather than men and of the elderly rather than young people. Even in the past few decades there seems to have been another swing of the pendulum and the rate among men, although still only a fraction of that among women, appears to be rising. However, over the years there is one constant factor, that this is and always has been a condition of the lower social classes. In the eighteenth century, it was prevalent among sailors and soldiers, but not among their officers; in civilian life, it was prevalent among labourers, but not their 'betters'. In the twentieth century, it still remains a condition of social classes IV and V rather than I and II.

Causes and distribution of leg ulcers

Several reasons can be advanced to explain the age and sex distribution in the eighteenth century, but these must be interpreted carefully. To say that people just did not live as long as in present times is too superficial. It is possible to account in this way for the age ratio, but not for the absolute preponderance among younger males. For this, infection must be implicated very strongly indeed. Pathogenic organisms such as the clostridia, the haemolytic streptococcus and some of the anaerobes even now produce the same clinical picture as that recorded in historical case studies; tuberculosis of the skin and syphilis must also have been involved. In the appalling environmental situations normal to sailors and soldiers such infections would be rife; poor hygienic standards would similarly affect their civilian counterparts. Women might have been likely to avoid the worst of these living conditions, as well as being less prone to trauma and its almost inevitable concomitant, infection. Of course, diet must have played a part, and in the armed forces a major part. The scurvy of sailors is well recorded, but it also had a counterpart—'land scurvy' (Hooper, 1825). Again, it is reasonable to assume that women would have had a more varied diet.

Advances in hygiene and in diet in the twentieth century brought a tremendous reduction in the ulceration associated with infection and deficiency disease. As these were almost exclusively responsible for the condition in young males, the reversal which occurred in the age and sex pattern is only to be expected. The total incidence of ulceration dropped and the virtual elimination of young males from the statistics caused the condition to become one of older females. This bias has persisted. Once again, other factors contributed, and perhaps the most important of these is pregnancy. Frequent childbirth and the protracted lying-in period once considered essential produced a high rate of postpartum venous thrombosis. 'Blue leg' and 'white leg', both almost inevitably going on to post-thrombotic ulceration, were routine occurrences.

The past few decades seem to be bringing yet another change in the pattern. Many clinicians have the impression that the sex ratio is altering once more and that the proportion of males affected is now rising. This change seems to be associated with a fall in the incidence of simple venous ulceration—the so-called varicose type—which is possibly due to the development of better treatment techniques and their increased availability. The rise in the proportion of males is probably a side-effect of the increase in male longevity, so that ischaemic disorders and their ulcerative sequelae, a condition of the male rather than of the female, are becoming more common.

From this welter of epidemiological change, one constant factor emerges, namely the association of ulceration of the leg with social classes IV and V. Such a definite class distinction is understandable in the eighteenth century, when the contrasts in living standards were so great, but it is much more difficult to explain in modern times. It could be advanced that life style and dietary differences are still important, but it is more likely that ignorance and delay in seeking medical care, so very much a problem within these social groupings, are now primarily responsible. Ischaemic ulceration in men may be linked with the greater incidence of cigarette smoking in social classes IV and V.

However, while the statistical patterns are of the utmost interest, their importance must lie in the lessons they offer. The basic principle is that the leg ulcer is not a condition by itself, but is skin loss resulting from an underlying pathological process in the leg. It is the breakdown stage of a disorder, not the disorder itself. There are almost always at least two factors involved: the underlying abnormality and the reaction of the skin to the mechanical stress imposed by the abnormality. Together, these factors determine not only whether ulceration will occur, but also its extent and rate of resolution. In practice, the skin and its reaction to stress probably has the most significance. Using the simplest possible terms, a tough skin will survive intact where a thin, delicate skin will break down. The sex ratio, the age pattern, the familial and racial trends, all of these reinforce this approach.

Role of the general practitioner

Hospital care has only a minor part to play in the management of these patients. Indeed, with a large proportion of ulceration nowadays being the result of previous venous damage, and with postoperative deep vein thrombosis affecting upwards of 25 per cent of all patients undergoing abdominal operation (Kakkar *et al.*, 1969), up to 50 per cent in emergency hip surgery (Davis *et al.*, 1980) and 75 per cent in knee replacement (McKenna *et al.*, 1980), it is a sad fact of life that hospital admission, no matter how justified for other reasons, is a major source of leg ulceration. Until we have a technique to prevent deep vein thrombosis, its ulcerative after-effects will remain a serious problem. Of course, venous ulcers heal rapidly on admission to hospital, but this is only because elevation of the legs improves the venous drainage and prevents retrograde 'leak' into the skin. As soon as the patient is discharged and the drainage returns to its previous state, the ulcer all too often recurs.

This condition is definitely one of general practice, and one that can and should be handled within general practice. For most patients no complicated equipment or sophisticated investigations are of any real value, so treatment, which is simple but effective, can easily be applied in the home or surgery, and our nursing colleagues—more and more of whom are being specifically trained to do so—can take over their care. It is unkind (unless it is absolutely necessary) to impose the discomfort of frequent attendances at hospital on these usually elderly patients, since they are often seen by junior and untrained staff. More important still, the general practitioner's major task lies in the field of prevention. Emphasis on mobility, control of oedema, meticulous care of the skin, withdrawal of nicotine in ischaemia, diagnosis and stabilization of diabetes, all of these can make the difference between a leg at risk and actual ulceration.

Even so, many questions remain unanswered. We just do not know the part played by dietary factors, vitamins and trace elements. We need to delineate the range of organisms that are truly pathogenic and those that are only saprophytic. The autoimmune type of ulceration is still very much of a mystery. What is the place of hormone therapy in protecting the postmenopausal skin? All of these need to be investigated much further, but, since this is a condition of general practice, we must accept that we are the only ones who can carry out the necessary studies. It is a curious finding that most chronic patients seem to achieve what can only be described as a totally unrealistic composure about their ulcers; the psychiatrists may argue as to why, but we must take the greatest care not to develop a similar frame of mind.

References

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Health centres

The number of health centres in operation in each of the regions in England at 1 October 1978 was as follows:

Region	Number
Trent	105
South Western	96
Yorkshire	92
North Western	92
West Midlands	78
Northern	71
Oxford	50
North-East Thames	43
South-West Thames	43
Mersey	42
North-West Thames	40
Wessex	38
East Anglia	29
South-East Thames	21
Total	840

Source: *Journal of the Society of Administrators of Family Practitioner Services* (1980), **7**, 115.