What is happening to peptic ulcer?

Most British gastroenterologists would probably say that they have noticed a decline in the frequency of peptic ulcer in recent years. How soundly based is this view, is it true of other countries with Western patterns of life, and what are the possible explanations?

Certainly large changes have occurred in the frequency of ulcers in the last 100 years. William Brinton wrote exclusively about gastric ulcer in his book published in 1867, presumably because duodenal ulcer was virtually an undescribed disease; but 30 years later series of patients with duodenal ulcer were being reported. Between the first and second world wars duodenal ulcer became more common than gastric ulcer; while gastric ulcer, formerly a disease which occurred predominantly in young women, developed the pattern that we now know—with maximum impact on the elderly, both men and women.

Duodenal ulcer seems to have reached a peak frequency in the middle 1950s, and both this and gastric ulcer may since have become less of a problem.

Several possible explanations exist for these recent changes. The incidence of gastric and duodenal ulcer may have fallen; the advent of endoscopy may have brought greater diagnostic precision and so reduced the number of prescriptive diagnoses; or new treatments may have altered the natural history of the diseases and reduced the need for hospital attendance or admission.

Reliable indices of ulcer frequency are difficult to define. Few patients die of ulcer; and death rates are much higher, perhaps 200 or 300 times higher, in elderly patients than in the young, reflecting the problems posed by associated disease. The overall numbers of patients admitted to hospital with ulcer are recorded in Britain and elsewhere, and operation rates and complication rates are also obtainable; but the individuals concerned form a special sample of the total population of patients with ulcers. Furthermore, those who are admitted may have had their disease newly diagnosed or may have had it for many years, so that true incidence rates cannot be obtained. Special surveys are needed to determine the incidence of ulcer in the community, but few such surveys have been conducted; and the increasingly intensive use of endoscopy as a diagnostic tool makes it virtually impossible to produce a fixed base against which figures produced at different periods could be judged.

The evidence available in Britain generally shows that peptic ulcer has become a less frequent problem. Overall mortality and admission rates for gastric and duodenal ulcer have fallen in the last 20 years in England and Wales. This fall has been more obvious in men than in women and has been particularly pronounced for duodenal ulcer in men in recent years. Perforation rates for gastric and duodenal ulcer have also fallen in men but not in women. Parallel findings in specific areas or groups of individuals include a fall in the overall number of ulcers diagnosed and in the perforation rates in York and Reading respectively, a fall in the incidence of duodenal ulcer in male doctors between 1947-50 and 1961-5, and a fall in sickness absence certified as due to ulcer between 1953-4 and 1971-2.

Outside Britain, the death rate from peptic ulcer disease has fallen in Denmark since the 1950s, though no change in the incidence of gastric or duodenal ulcer has been detected there. In the United States, however, various figures have shown a decline in the numbers of spells of incapacity due to gastric or duodenal ulcer, and a halving of diagnoses of ulcer in the work force and in the armed services from 1960 to 1972. The numbers of new cases of duodenal and gastric ulcer have also declined; while hospital admission rates for duodenal ulcer in particular, and death rates for peptic ulcer in general, have fallen substantially. The conclusion must be that overall the frequency of ulcer, particularly duodenal ulcer, seems likely to have fallen, but that the extent of that fall is difficult to determine.

Ulcergie dyspepsia can be treated effectively without the use of any objective diagnostic tests, and however much the purist may deplore that practice it is clearly widespread. In one study about a third of the patients prescribed cimetidine for the first time had it before a radiological or endoscopic diagnosis of ulcer had been made. Indeed, the diagnosis of ulcer is possibly delayed, perhaps indefinitely, while multiple courses of symptomatic treatment are given. Evidence that the advent of new drug treatments may indeed be changing the patterns of clinical practice is given by sudden falls in operation rates (against the background of already declining rates) in Britain and the United States since the introduction of 

If the frequency of ulcers has genuinely declined, what is the explanation? Susser and Stein suggested that generations born in the last quarter of the nineteenth century were
exposed to maximum risks, which they carried through life, and that the risks have since receded. Consideration of age-specific ulcer perforation rates in Britain shows that, in general, reductions have been appreciable in the young; while in the elderly there have been smaller falls or even (as in middle-aged and elderly women with duodenal ulcer) an increase in perforation rates. Such differential changes are difficult to explain by a single cohort effect, particularly where a rise is now occurring in a group born after the end of the nineteenth century; and specific environmental influences need to be examined. Our knowledge of these is patchy. Smoking, the consumption of coffee and cola-type beverages, and other dietary factors (perhaps including low fibre intake) have been suggested as predisposing to ulcer,12-20 as has the use of non-steroidal anti-inflammatory drugs.21 Milk consumption has been associated with protection.22 23 The relative importance of these and other factors is uncertain. If poor social conditions contributed to the development of ulcer in the past, what will be the impact of high unemployment rates be now? There are many questions still to be answered.

M J S LANGMAN

Professor of Therapeutics,
University of Nottingham,
City Hospital,
Nottingham NG5 1PB

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