

PEPTIC ULCERS IN AN ESSEX VILLAGE

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One in every six men aged 45 to 59 had been found to have a peptic ulcer (Lipetz *et al.*, 1955).

“**P**EPTIC ULCER and chronic recurrent dyspepsia . . . accounted for one per cent of all the diagnoses and involved between one and four per cent of the work of the practice” (Backett *et al.* 1954). “In any one year the general practitioner with an average practice may expect to cope with some 40 patients with peptic ulcer” (Fry 1964).

All these figures emanate from urban practices and suggest that peptic ulcers are responsible for a good deal of the practitioner's work. There appear to be no comparable studies of peptic ulcer in rural general practice and the present paper is an attempt to remedy this deficiency. Here in this average-sized practice where we are in the happy position of having seen only three new cases of peptic ulcer in five years and in which, in two years out of the five, no working time was lost by any male patient on account of his ulcer, the picture is much brighter.

The study

The practice is based on a village of some 2,000 inhabitants, about half of whom live in the village itself and most of the rest within a radius of five miles. Communications with London, 50 miles away, are indifferent, the nearest main-line railway stations being at Chelmsford (12 miles) and Bishop's Stortford (14 miles). Commuters therefore are scarce. Though by no means a sleepy, old-world village, it is not obsessed by a sense of urgency. Most people earn an adequate wage and most people seem reasonably content with their lot. The public school of some 600 boys naturally provides employment for quite a number of able-bodied workers, and perhaps more important, for quite a number of elderly or partially disabled workers who might otherwise find it difficult to get jobs. As there is only one doctor in the village, free choice of

doctor is largely a myth and this has the advantage that the practice population is not self-selected.

The age/sex breakdown is shown in table I, the social classes in table II.

TABLE I
AGE/SEX RATIO OF PRACTICE POPULATION

<i>Age</i>	0-	10-	20-	30-	40-	50-	60-	70-	<i>Total</i>
Males ..	195	169	133	158	143	133	90	70	1091
Females	180	153	155	156	143	135	114	95	1131
								Total	2222

The social class breakdown makes no pretence of being accurate owing to the impossibility of keeping up with the changing of jobs that occurs and the difficulty of grading some of these jobs.

Social class 2 is inflated by the number of public schoolmasters who live in the village (the public schoolboys are excluded from the survey). Of the males of working age, roughly 20 per cent work on the land, either as farmers or farm labourers; the remainder work in the village or in nearby towns in various light industries. The population is fairly static. For instance of the 220 males between 45 and 60 now in the practice, 56 per cent were here 18 years ago when the present practitioner took over the practice and the majority of these have spent all their lives here.

TABLE II
SOCIAL CLASSES OF PATIENT POPULATION

<i>Social class</i>	<i>Percentage</i>
1	5
2	18
3	39
4	19
5	19

Method

This study is retrospective, which means that information that one would have made a point of acquiring in a prospective study is often not available and comparison with the figures of other workers is only possible over a restricted range.

There is a tradition of good record-keeping in the practice which, since I have been here (18 years), has become perhaps something of a fetish. No patient is seen unless his records are to hand, and the practice being a dispensing one, he gets his medicine by having it written up on his record card and taking this through to the dispenser

who provides him with the medicine. Thus, unrecorded doctor/patient contacts of any importance cannot occur. If a patient dies his records are retained; if he leaves the practice a photostat copy of his records is retained. All past and present records are thus to hand; the remaining problem of tracing the patients who have had ulcers can be overcome because for the last six years a practice index has been maintained. This has been described elsewhere (Walford 1962) and briefly consists of a combination of card index and loose-leaf notebook with one page per disease, in which the patient's name is entered at the time of diagnosis.

All cases of peptic ulcer occurring in the practice in the five years 1959 to 1963 inclusive, have been analysed. The analysis was done at the beginning of 1965. Since, however, many of the patients have been in the practice all their lives, follow-backs are available in these cases for at least the full 18 years that I have been here and in some cases for much longer—a follow-back meaning tracing the patient's history backwards in his records.

Definition

All those who had a radiological ulcer, whether their barium meal had been carried out during the period of the study or some time in the remote past, were included in the ulcer series provided they had indigestion during the study period 1959–1963. This could lead to over-scoring as there is no certainty that just because a patient had an ulcer 20 years ago, all subsequent episodes of indigestion are due to this ulcer. Under-scoring could also occur because the incidence of ulcers is bound to depend on the diligence with which one seeks them out. There is open access to radiology in this area and full use is made of this. But one would not *normally* get a barium meal done on a patient with indigestion on his first attendance unless there was strong evidence that he had an ulcer. Failure of the episode to clear after one or two attendances would be an indication for radiology as would repeated episodes of any severity.

Because of variation in diagnostic keenness between practitioners, absolutely comparable figures for ulcer incidence are not possible to obtain. It is for this reason that figures for dyspepsia have been included in this paper. The greater the enthusiasm with which one refers the dyspeptic patient to the radiologist, the higher will the ulcer figure be and the lower the indigestion rate; but the sum of the two will remain constant. The fact that the ulcer : dyspepsia ratio in this practice of 1 : 4·4 is virtually the same as that of Doll *et al.* (1951) 1 : 4·5 and Hodgkin 1 : 4·5 suggests that the standard of diagnosis is about average.

Findings

The total number of new ulcer cases in these five years in this

practice of 2,222 patients was three. There was in addition one old man of 85 who had two severe haematemeses in 1963 for which he declined investigation. He is alive and well and may well have had a benign ulcer but cannot be included in this series for lack of proof. The three cases represent an annual incidence of 0.25 per 1,000. This is extremely low and is in fact about one-fifteenth of Fry's incidence in Beckenham (4.2 per 1,000). On the other hand, the annual prevalence rate (i.e. the total number of new and old cases treated each year), which of course includes imported cases first diagnosed elsewhere, was 3.5 per 1,000 which is about a quarter of Fry's annual prevalence rate of 16 per 1,000.

Comparison can also be made with Lipetz *et al.* (1955). They found in their Edinburgh practice that between the ages of 45 and 60 one man in six had an ulcer at some time. In this practice, out of a total of 122 males aged 45 to 60 who had been in the practice for the whole 18 years that I have been here, five had had peptic ulcers at some time, which is about a quarter of the rate found by Lipetz *et al.*

The old ulcer cases in relapse treated during 1959-1963 numbered 14, seven of which originated outside this practice. Table III shows the distribution of the 17 ulcer cases, 14 old and three new.

Loss of working time was not great. In five years 17 weeks were lost by male patients undergoing purely medical treatment and 30 weeks were lost by male patients who finally underwent surgery (this includes post-operative time off work). In two years out of the five, no working time was lost by any male on account of his ulcer.

TABLE III
DISTRIBUTION OF ULCER CASES

	<i>Males</i>	<i>Females</i>
Gastric ..	4	2
Duodenal ..	9	2
Total ..	13	4

Complications

Haemorrhage occurred in three of 17 patients in five years (18 per cent). Following back their history beyond this five-year period as far as their records allow, six out of 17 haemorrhaged at some time (35 per cent). This compares with Fry (1964) 14 per cent, Lipetz *et al* (1955) 16.4 per cent, Finer and Fry (1955) 18 per cent. These figures are not comparable because the frequency of haemorrhage and perforation is influenced by the span of time covered by the patients' records.

There was one perforation in five years, an annual rate of six per cent compared with Hodgkin four per cent, Fry six per cent, Finer

and Fry ten per cent and Lipetz *et al.* 19.2 per cent.

Two patients with gastric ulcers developed carcinoma of the stomach ten and 16 years respectively after the original diagnosis of ulcer.

Treatment

As in Fry's series, all these 17 patients were given ambulatory treatment at home in the first instance. Only three were sent to hospital for medical treatment. Two out of the 17 cases were submitted to elective surgery during the five years and two to emergency surgery.

Chronic dyspepsia

Cases of dyspepsia have been arbitrarily divided into two groups:

(1) Chronic non-ulcer dyspepsia, corresponding to the chronic non-ulcer dyspepsia of Lipetz *et al.* and consisting of patients with recurring indigestion who were either not x-rayed because their symptoms did not appear to warrant it or who were x-rayed but found to have normal pictures. Included in this group are four patients with apparently positive x-rays (three duodenal, one gastric ulcer) who at laparotomy were found to have no evidence of ulcer past or present. As mentioned earlier it seems important to include these cases of non-ulcer dyspepsia in any discussion of ulcers because the most obvious reason for a low incidence of ulcers in a practice is that the ulcers are being missed, and if they are being missed they should be found among the dyspepsias.

In the five years under review there were nine cases of non-ulcer dyspepsia, an annual incidence of 0.8 per 1,000. In the same period 15 old cases were treated making a total of 24 (12 males, 12 females). Of these 12 were x-rayed and 12 were not.

The annual prevalence rate was 4.2 per 1,000. The combined annual incidence of new cases of peptic ulcer and non-ulcer dyspepsia was 1.1 per 1,000 which compares with Fry's figure of 4.2 per 1,000 for ulcers alone. The combined annual prevalence rate was 7.9 per 1,000 compared with Fry's 16 per 1,000 for ulcers alone.

(2) Trivial dyspepsia corresponding to what Lipetz *et al.* call digestive upsets of short duration. There were 53 of these in five years (31 males, 22 females). Their comparative triviality is shown by the number of times they reported for treatment or investigation in five years (table IV). They seemed to represent mild dietetic indiscretions and anxiety states.

The total five-year figures therefore were:

Ulcers	17
Chronic non-ulcer dyspepsias	24
Trivial dyspepsias	53

This gives a ratio of ulcers to all dyspepsias of 1 : 4.4; Doll *et al.* found a ratio of 1 : 4.5, Hodgkin 1 : 4.5. The fact that this ratio is maintained in the face of a lower than average incidence of peptic ulcer implies a correspondingly lower than average incidence of dyspepsia in the practice which could be interpreted as indicating that peptic ulcer and dyspepsia may have a common aetiology.

TABLE IV
EPISODES OF TRIVIAL DYSPEPSIA SEEN IN FIVE YEARS

One episode, one attendance	..	..	..	25
One episode, two attendances	..	..	..	6
One episode, two plus attendances	..	..		3
Two episodes	..	..	..	16
Two plus episodes	..	..	..	3

Discussion

The incidence of peptic ulcers seems to be quite remarkably low in this village. The prevalence, though low, is not quite as strikingly so but of course is raised by the fact that a good many of the cases originated outside the village.

What are the reasons for these low figures? Presumably they are multiple. The Registrar General's figures show a gradient of mortality from peptic ulcers, highest in the conurbations and lowest in the rural districts. The mortality in the conurbations is about half as great again as that in the rural districts. Pulvertaft (1959) found that the incidence of peptic ulcers in the town of York was higher than in the surrounding countryside; the ratio for duodenal ulcers was 1.7 : 1.

Occupational. Doll *et al.* found that agricultural workers suffered from peptic ulcers about one half as commonly as town workers; about a fifth of the males in this village work on the land. The present series is too small to analyse by occupations but as far as it goes it does not seem to indicate any immunity on the part of the agricultural workers here.

Genetic. Doll and Buch (1950) found that peptic ulcers occur about two to two and a half times as frequently among living sibs of peptic ulcer patients as among comparable groups from the general population. Doll and Kellock (1951) produced evidence that gastric and duodenal ulcers were mainly independent from the point of view of heredity; relatives of duodenal ulcer patients tend to have duodenal ulcers and relatives of gastric ulcer patients tend to have gastric ulcers. Kuenssberg (1962) found that the offspring of males with duodenal ulcers had 3.3 times the expected number of duodenal ulcers and the offspring of females with duodenal ulcers had 7.2

times the expected number of duodenal ulcers. In any condition where heredity plays a part, regions of high or low incidence are more likely to develop where the population is fairly static. This village has a comparatively static population and the inhabitants may well inherit a certain immunity from peptic ulceration. In view of the association between duodenal ulcers and patients with blood group O (Clark *et al.* 1959) it would have been interesting to investigate the blood group state of the local population, but that was not possible.

It is possible that country people may be more phlegmatic about bearing pain than townsmen. In York, Pulvertaft thought this unlikely because the ratio of the number of perforations to ulcers was the same in both town and country, which, assuming that ulcers perforate with equal ease in both communities suggests that both communities consult their doctors about ulcer symptoms with equal freedom. It could be argued that in rural areas the distance of patients' residence from the doctor might act as a deterrent but the distances in this practice are not really excessive and seem to be no bar to consulting the doctor for many trivial ailments.

If there is such a thing as an 'ulcer personality'—a tense person possessing unusual drive and seeming always to be in a hurry (Bockus 1963)—such a person might well find life in a quiet village uncongenial and might seek an outlet for his energy in town thus leading to the gradual weeding out of ulcer-prone families from the villages.

Lower standard of diagnosis in the country? It could be maintained that many cases have not been x-rayed that should have been. But the ratio of ulcers to dyspepsias is about the same as that reported by other workers and even if all the chronic non-ulcer dyspeptics (whatever the result of their x-ray) had had ulcers, the total annual prevalence rate per 1,000 (7.9) would have only been half that of Fry's figures for ulcers alone (16).

Social class has been shown not to influence the incidence of duodenal ulcers though gastric ulcers are commoner in the lower than the higher social classes (Doll *et al.* 1951).

There are therefore quite a number of reasons why one might find fewer ulcers in a village of this sort than in towns, but no real evidence as to which of these factors, if any, is exerting a major influence. Whether in addition the slower tempo of country life or differences in dietetic habits play a part it is very difficult to say. More studies of rural areas might throw light on the aetiology of peptic ulcers.

Summary

An analysis is given of peptic ulcers as seen in an Essex village.

Their annual prevalence rate is about four times less than in towns. In the five-year period analysed, the annual incidence was only one-fifteenth of that experienced by Fry in Beckenham. Both ulcers and indigestion were found to be equally reduced. Possible reasons are discussed.

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