Leading article

Dyspeptic symptoms in the community

An international working party recently proposed a definition of dyspepsia as 'upper abdominal or retrosternal pain, discomfort, heartburn, nausea, vomiting, or other symptom considered to be referable to the proximal alimentary tract.[1] This broad definition was divided into non-ulcer dyspepsia, with symptoms lasting for more than four weeks, unrelated to exercise and for which no focal lesion or systemic disease can be found responsible, and organic dyspepsia, caused by specific lesions such as peptic ulcer, reflux oesophagitis, gastric carcinoma and cholelithiasis, which could be readily identified on routine investigation. This definition is similar to that proposed in a position paper published by the Health and Public Policy Committee of the American College of Physicians, in which the basic element of dyspepsia was said to be epigastric pain or discomfort, accompanied by fullness, burning, belching, bloating, nausea, vomiting, fatty food intolerance or difficulty completing a meal.[2] The authors of this paper were confident that heartburn, defined as a hot or burning sensation located in the substernal region and often related to position, is generally distinguishable from dyspepsia. In reality this distinction may not be so easy to make, because a recent community survey of dyspeptic symptoms has shown that both upper abdominal discomfort and heartburn are frequently experienced by people with upper alimentary digestive complaints.[3]

It is clear that dyspeptic symptoms are commonly seen in the general population, however broad and imprecise the definition; they are a frequent cause of consultation with general practitioners and also account for a substantial proportion of patients referred to gastroenterology clinics. Although recent years have seen the documentation of significant changes in the epidemiology and natural history of peptic ulcer disease,[4-8] little corresponding data on dyspepsia have been published for over 20 years. Doll, Avery-Jones, and Buckatztch published a large study in 1951 in which they described the prevalence of dyspepsia and peptic ulcer disease and sought to link this to occupational factors.[9] They investigated over 6000 employees working for a variety of companies in London, asking whether they had ever had a peptic ulcer or suffered from indigestion; on the basis of an interview the subjects were classified, rather arbitrarily, into 'major' and 'minor' dyspepsia or no dyspepsia. They found that 17% of patients had minor dyspepsia and 13% major dyspepsia; those with major dyspepsia were interviewed and 334 peptic ulcers were diagnosed (of which 69% were presumptive diagnoses based on the clinical history). The general conclusions of the study were that almost 30% of the sample had suffered dyspepsia in the preceding five years and almost 2% had peptic ulceration. Duodenal ulcers appeared to be more common in men between the ages of 20 and 64 years, with the highest incidence in those holding 'responsible positions'. It also appeared that anxiety over work and personality factors leading to anxiety were unduly common in subjects with ulcers. Gastric

ulcers, on the other hand, were found to be uncommon before the age of 35 years and were related to socio-economic class, being most frequent in the poorest subjects.

At about the same time two studies from general practice reported on the prevalence and management of peptic ulcer, in south London and Edinburgh. Finer and Fry[10] found a point prevalence of 17·7 ulcers per thousand patients at risk in July 1954, with a five year period prevalence of peptic ulcer disease of approximately 30 per thousand. Lipetz, Skarloff, and Stein[11] reported a prevalence of peptic ulcer of 4·7% in their practice population, with a maximum prevalence of over 10% in patients between 45 and 59 years of age. Non-ulcer dyspepsia was found in 2·6% of their practice population, with a peak occurring in the 55 to 64 years age group.

Shortly after this, Doll reviewed the epidemiology of peptic ulcer and underlined a number of changes which had taken place in the prevalence of ulcer disease over the previous five decades.[12] Gastric ulcer in young women, which had been very common at the beginning of the century, was now rare; gastric ulcer in men became more frequent after the first world war, as did gastric ulcer in older women. Duodenal ulcer had become much more frequent since the early 1930s and its prevalence was continuing to increase at the time of publication.

Twenty years ago Weir and Backett[13] published their study of dyspeptic symptoms and peptic ulceration in an almost static population of men in semi-rural, north-east Scotland. Dyspepsia and peptic ulcer disease in about 1500 men was studied over a period of three years. The authors showed that when current and recent dyspepsia were taken together nearly one in every four men suffered from the 'dyspepsia-peptic ulcer' syndrome. A diagnosis of peptic ulcer had been made at some time for one man in every eight. Weir and Backett concluded that dyspepsia was as common in the Aberdeen area in the early 1960s as it was in London 15 years before, at the time of Doll's original survey, but that peptic ulcer was more common. Over the three year period the total amount of 'serious' dyspepsia observed appeared to be unchanged, suggesting that the number of men developing dyspepsia was approximately equal to those who apparently became free of symptoms.

In the 1970s Barnes and Gear began to publish a series of studies on dyspepsia in general practice assessed by endoscopy and radiology. In an early paper they examined 50 consecutive patients with dyspepsia presenting to general practitioners over a six month period, discovering specific lesions in 60%.[14] They suggested that a population of 300 000 served by a single district hospital is likely to contain as many as 4500 'severe dyspeptics', of whom as many as 60% (2700) would have a specific lesion of the upper gastrointestinal tract. In later studies of a larger number of patients, Gear and Barnes concluded that the prevalence of dyspepsia in the urban practices in Gloucester was 10·4 per thousand patients and that in a rural practice 10 miles outside the city the prevalence was much higher, at 27·3 per thousand.[15 16]

In a recent study of the community prevalence of dyspeptic symptoms in over 2000 people in Hampshire, England,[3] the six month period prevalence of dyspepsia has been shown to be 38%. A further 25% had experienced dyspepsia at some time, but not in the previous six months, with 37% of the sample never having experienced significant dyspeptic symptoms. Although the time periods of observation were different in all three studies, it seems

that the prevalence of dyspeptic symptoms has changed little since the earlier surveys in London and north-east Scotland. The recent work has provided new information, however, about the distribution of dyspeptic symptoms. In particular it has shown an overlap between upper abdominal and retrosternal symptoms in almost half of the dyspeptic patients and has shown that although symptom prevalence is fairly constant across age groups in men, dyspeptic symptoms become less frequent with age in women. This, of course, is at odds with recent observations that elderly women, particularly those taking non-steroidal anti-inflammatory agents, have emerged as a group at particular risk of the complications – perforation and haemorrhage – of peptic ulceration.[7] Although peptic ulceration itself has been linked to social class in a number of studies, the community survey has shown that although the prevalence of dyspepsia is almost constant across socio-economic groups, social class is strongly associated with consultation with general practitioners.

Gastrointestinal disorders account for about one in 10 of all consultations with general practitioners and almost half of these are because of dyspepsia.[17] In common with many frequently experienced symptoms in the general population, however, most patients with dyspepsia do not seek medical advice. Of those patients accounting for the six month prevalence of dyspepsia in the community survey, only one quarter had consulted their general practitioner about their symptoms. A number of factors interact to predict consultation behaviour for dyspepsia. One important factor seems to be the patient's own doctor: consultation rates for dyspepsia varied between 19% and 47% in the eight general practitioners participating in this survey, suggesting that the relationship between doctor and patient and the expectations which it engenders is an important determinant of the likelihood to consult. Social class is also an important predictor of consulting behaviour, with consultation rate rising steeply as social class falls. Curiously, simple parameters such as symptom frequency, symptom severity and the effect of symptoms on daily living are poor predictors of consultation.[18] Much more important seem to be the anxieties and concerns that patients have about the significance of their symptoms. Most important of these appears to be the fear that dyspeptic symptoms are linked to a serious or even fatal condition, but patients are also concerned about the possibility of heart disease and malignancy generally and consulting patients have frequently had experience of abdominal malignancy in friends or family. Psychological factors are clearly of importance in peptic ulcer disease[19 20] and it comes as no surprise to find that they are also important in consultation for dyspepsia. Although level of anxiety, as measured by an anxiety trait inventory, is not associated with consultation, a recent experience of disruptive or threatening life events is more frequent in dyspeptic patients who consult their general practitioners, compared with those who do not. When patients in this study were carefully matched for social class, the predictive value of a number of these variables was weakened, although concern about the seriousness of symptoms remained strongly associated with consultation behaviour.

Physicians are, therefore, faced with considerable difficulties in assessing dyspeptic patients, not only because of the problem of assigning to their symptoms an anatomical or pathophysiological basis, but also because of the non-physical influences which are at play. It is, however, important to make

an accurate diagnosis in dyspepsia. The complications of peptic ulcer disease, for example, are still a cause of substantial morbidity and mortality, with 30 000 patients being admitted to hospital every year with upper gastrointestinal haemorrhage, carrying a mortality of around 10%.[21] The social and economic implications of dyspepsia are considerable. For example, in Sweden (population 8 million) the cost of outpatient care and medication for dyspepsia has been estimated at £26 million and, when the loss of earnings and sick leave benefits are taken into account the annual cost of dyspeptic conditions has been estimated at £280 million.[22] Figures like this emphasise the importance of using therapeutic agents and investigations wisely, particularly at a time of shrinking resources. Clear guidance is now required about the interpretation of these common symptoms, the need to investigate dyspeptic patients and the indications for using potent and expensive acid suppressing and ulcer healing agents.

Horrocks and de Dombal have pointed out that over half of patients with dyspepsia emerged from their first contact with the physician, in general practice and hospital medicine, without a firm, accurate diagnosis being made.[23] Over the last 10 years considerable effort has gone into developing a variety of systems for evaluating symptoms in dyspepsia, predicting the likelihood of underlying organic disease and, therefore, the need to treat or investigate. The initial approach to this problem came from endoscopy and radiology units in which 'positive' findings on investigation were linked to specific features of the clinical history.[24-26] The most important of these, and a factor which seems to have stood the test of time, is the patient's age and it now seems clear that patients over 45, presenting for the first time with significant dyspepsia probably merit investigation, while in those under 45 years of age, treatment may either be empirical, expectant or both.[27] More recently a number of computerised systems for diagnosing dyspepsia have been developed. These use a data base of information collected from a large number of patients with dyspepsia, including findings at investigation, and, using a questionnaire approach of varying complexity, seek to provide, on the basis of the presenting symptom complex, a prediction of the likelihood of a variety of diagnoses.[28-30] The questionnaires, to date, have been too long and complicated to be used routinely in the hospital setting or in general practice and there have also been problems of transferability of computer aided diagnostic symptoms between populations.[31]

General practitioners and hospital doctors must, therefore, use a simpler and more pragmatic approach to patients presenting with dyspeptic symptoms.[32] Selection of patients requiring investigation is crucial; it seems appropriate to base initial 'triage' on simple factors such as patient's age and the presence of specific symptoms known to be associated with organic disease, such as night pain and systemic upset. Hopefully the recognition that non-physical factors are important determinants of consultation will mean that these are taken into account when providing an explanation of symptoms to patients and in planning management.

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