DUODENAL ULCER IN SOLDIERS

Lieutenant-Colonel W. O’BRIEN
M.D., M.R.C.P., R.A.M.C.
Assistant Professor of Tropical Medicine, Royal Army Medical College

In the last war peptic ulceration was responsible for as many discharges from the armed Forces as were actual wounds and was only surpassed by psychiatric casualties. This is in contrast to previous wars including the 1914-18 war when this disease was not a serious problem. Peptic ulcer remains one of the major medical problems in the Army, for men may be required to serve in outstations abroad, far from a hospital with facilities for adequate radiological examination, or where blood transfusion or surgical treatment are difficult. This problem is shared with the other fighting services, the Colonial Service and many commercial undertakings. In the Army the rate of invaliding for peptic ulcer in 1958 was 1.1 per 1,000 male other ranks, a rate exceeded only for psychiatric disorders.

In order to review this problem 100 soldier patients with radiologically proven duodenal ulcers were investigated at the Queen Alexandra Military Hospital, Millbank. There is a tendency in the Service to invalid men with ulcers, if the diagnosis is made in the early years of their engagements. This has the result of artificially dividing duodenal ulcer patients in the Army into two groups, those within three years of joining and those who have had many years of service. There are differences between these groups, and so 50 from each group comprise this series. It is interesting that 80 per cent of the young men had developed their symptoms in civil life. Indeed four of them had had symptoms since childhood, and one had had a haematemesis at the age of 14. The majority of the older men were seen between the ages of 30 and 40 and had on average 16 years’ service each; they were often key men, excellent soldiers, ambitious and with heavy family responsibilities.

Aetiology

It is now generally accepted that duodenal ulceration is a genetically determined condition. In this series no less than 48 per cent of the young soldiers gave a positive history in first degree relatives, indeed many of their fathers had undergone partial gastrectomy, compared with 18 per cent of the older men. In both groups 54 per cent of the men belonged to blood group O, compared with 46 per cent of the general population. Two of these young soldiers were identical twins with identical histories and identical barium meal radiographs. Though duodenal ulcers appear to have a hereditary basis, the symptoms are commonly precipitated by stress, and the degree of stress required varies greatly. In the young group there were three main causes of stress, frustration with army life (28 per cent), army diet (24 per cent) and family worries (24 per cent). In the older group the predominant cause of stress was family worry (38 per cent), and in a surprising number divorce proceedings had precipitated symptoms. These in turn often followed long periods of family separation. After domestic worry came periods of intense work (24 per cent) in men who often
seemed over-conscientious, had worked long into the night in preparation for such things as the Suez expedition or various state ceremonial occasions, or on intense courses followed by examinations on which the man's future depended. Another 10 per cent blamed the army diet for their symptoms. Though the army food is excellent, much is fried in response to popular demand and is thus quite unacceptable to these men. They had had no symptoms while living in quarters or at home, but when they moved into barracks the fried food quickly caused pain. Frustration with army life played no part in causing breakdowns in these long-term soldiers. In many cases the causes were multiple and in others less obvious. The following history is illustrative:

A sergeant was posted to a Kenya outstation and took his wife. They had more money than they had ever had before, a pleasant bungalow, a servant, and a car. Neither he nor his wife had ever lived outside a city; they became bored and frustrated and his wife never ceased to grumble. The sergeant developed a duodenal ulcer, but his symptoms were immediately relieved on stepping off the aircraft at London Airport.

These findings are in accordance with those of Tidy (1941). He found no evidence that war itself increased the incidence of peptic ulceration in soldiers but that the main precipitating factors were irregular meals and the stresses engendered by separation from home and family. He also noted that symptoms had originated in civil life in 92 per cent of these men.

Diagnosis

The outstanding fact revealed in this series was that in 80 per cent of the patients the diagnosis was obvious from the history, provided adequate time and care was taken in obtaining it. Thus the pain was gnawing and annoying, dull or aching in 74 per cent, and burning in 10 per cent. Others described it as a nauseating pain or even as a panic feeling. The pain was localized in the epigastrium in 88 per cent, relieved by food in 84 per cent and by antacids in 88 per cent, at least until the final and most severe stages. The pain was periodical in 94 per cent and woke the patient in the early hours of the morning in 69 per cent. There can be few diseases with such a constant clinical pattern. In the other patients the pain was usually suggestive of duodenal ulceration, for though the character or site varied, the time relationships were preserved. In only one patient was a hæmatemesis the first symptom of a chronic ulcer.

It has been suggested that duodenal ulceration is particularly common in cadaverous anxious men. Davies and Wilson (1937) described the typical duodenal ulcer patient as being thin in the face, sharp of nose, spare featured, sparely built and having an air of aggressive alertness. Such a description did not fit the vast majority of these patients. 72 per cent were noted as having excellent physiques and many were athletes, some of distinction. It was not uncommon for a large, tough rugby player to be admitted with a severe hæmatemesis, and some of the patients were Commandos. These soldiers were more in keeping with Lord Moynihan's (1932) description of the duodenal ulcer diathesis as occurring in men of vigour, strength, athletic habits and often of some prowess. It is sometimes difficult to
convince medical boards that a really healthy, burly, athletic young man is unaccept­able to the Army because of a duodenal ulcer. Only 13 of these men conformed to the asthenic type. The prevalent mental type was the sensible, well-orientated man of above-average intelligence. Although 30 per cent of the younger men appeared anxious, only 16 per cent of the older men openly worried but many of them admitted to being worriers over trivial things and perfectionists in their work.

In the confirmation of the diagnosis examination of the stools for occult blood was little help. The fractional test meals revealed hyperchlorhydria in 82 per cent of the younger men and in 72 per cent of the older men. Unfortunately hyperchlorhydria was also common in a parallel series of patients with dyspepsia due to other causes. The barium meal was reported as normal on the first occasion in no less than 34 per cent of the older men, only for a duodenal ulcer to be demonstrated on later occasions. The history obtained from one man was of interest in this respect:

This man, aged 22 years, had all the clinical features of a duodenal ulcer. His father, who had served in the Navy, had suffered from similar symptoms for many years and during his time in the Service had had many barium meal examinations, all of which were reported upon as normal. On leaving the service he continued to have pain, and repeat barium meals were performed in several civilian hospitals; each time he was told that no ulcer was present. Finally after a severe haematemesis a large ulcer was found at operation 20 years after his original symptoms had begun.

Complications

These duodenal ulcers in soldiers are of serious significance. Twenty-two patients had either haematemesis or melena, and ten of the ulcers had perforated.

Discussion

Two of the main problems arising with duodenal ulcer in the services are diagnosis and treatment. It is generally recognized that even under the best conditions an ulcer crater can only be demonstrated in 60 per cent of duodenal ulcers. It is true that in others local tenderness, spasm, or distortion due to scarring are helpful, but these too may be absent. The problem of the man with a typical history and negative barium meal is very real, especially if he is due to be posted abroad. One may have to decide the balance between the chances of malingering and the danger of sending a man to an area where blood transfusions and surgical facilities may be unsatisfactory. The finding that in the older group of men there were no less than 34 per cent in whom the original barium meal was negative underlines the difficulty, while the high rate of complications underlines the danger. This relatively high ratio of negative findings may be due to the fact that in the Army such patients are seen in hospital earlier than they would be in civilian life. Avery Jones (1949) has drawn attention to this problem and believes that such patients probably have subacute ulcers which tend to recur later with undoubted evidence of peptic ulceration. In another series of patients who had suffered from gastrointestinal bleeding with originally negative radiological findings, among 143 followed up 17 were later found to have a chronic duodenal ulcer (Avery Jones, 1959). The value of the clear-cut, stereotyped history in 80 per cent of the present series is evident.
Duodenal Ulcer in Soldiers

Medical treatment for duodenal ulceration is unsatisfactory. In a ten-year follow-up Martin and Lewis (1949) found that though medical treatment relieved symptoms, only 32 per cent of patients treated medically were apparently cured, and Ogilvie (1953) quoted almost exactly similar figures. Rae and Allison (1953) concluded that the natural history of the disease was not materially influenced in sailors by prolonged medical treatment.

It is, however, widely recognized that at least in certain patients the removal of a non-recurring precipitating stress may result in cure, and so a knowledge of such stresses, which in a homogenous population like the Army are remarkably constant, is of great importance in assessing the prognosis and the need for surgery. In some the genetic factor may so predominate that the mildest stress will provoke symptoms, while in others a severe upset such as divorce proceedings may be needed. In the hereditary group medical treatment has little chance of success, and there is nothing more demoralizing for a keen soldier than long periods in a low medical category with promotion barred to him. Indeed the frustration aroused frequently leads into a vicious circle, and early surgery is probably the best course.

Lastly it is obviously important that young men with duodenal ulcers should not be recruited for the fighting services or for other occupations in which they will be required to serve far away from hospital facilities. It has been shown that 80 per cent of the young soldiers in this series had had symptoms before joining the Army. It is admittedly a difficult problem, but it should be possible to eliminate more of these young men before they embark on such unsuitable careers.

Summary

One hundred soldiers with duodenal ulcers have been investigated. This is a disease of special importance in Service life. The problems of diagnosis and the aetiological factors of importance in treatment and prognosis are discussed.

REFERENCES