CHEST PAIN IN THE DIAGNOSIS OF GASTRIC ULCER

A. SHEDROW, M.D., M.R.C.S., L.R.C.P., *Johannesburg*

In previous communications[1, 2] I drew attention to a syndrome for the early diagnosis of gastric ulcers situated high on the lesser curvature, *viz.* pain in the chest, often without gastric symptoms. These ulcers commonly remain clinically silent for a considerable period, until a dramatic incident such as haematemesis intervenes, or signs of malignant degeneration of the ulcer appear. Buch[3] recently published 4 cases of gastric ulcers of the lesser curvature diagnosed on this syndrome.

I have since seen further cases presenting the same syndrome, and in this communication I report 3 cases selected because they present certain additional clinical features and radiological patterns. These 3 cases resemble each other in that (1) the chest syndrome was overlooked and (2) the radiological picture was that of a gastric ulcer associated with an extensive area involved, suggesting a possible neoplasm. In one case there was evidence of coronary disease in addition to the gastric lesion.

Case 1

A man aged 37 who consulted me in May 1958 complained of high chest pain for 2½ years, mostly on the left side, sometimes across the chest. The pain was never acute, but consisted of discomfort and a dull ache. He had no epigastric pain, dyspepsia or other gastric symptoms. The pain was unrelated to food intake. He was very listless, highly strung and unable to concentrate. He consulted a doctor who, attributing the chest pain to excess of abdominal fat, put him on a reducing diet, but he felt worse and the pain did not disappear. On clinical grounds I diagnosed the case as gastric ulcer of the lesser curvature and advised a barium-meal test.

The X-ray examination (Fig. 1) showed a marked irregularity of the lesser curvature beneath the cardio-oesophageal junction. The appearances were of a gastric ulcer associated with either neoplasm or granulomatous process. The patient was put on treatment for gastric ulcer and soon the chest pain diminished and his general condition improved. Another X-ray taken 25 days later (Fig. 2) showed a diminution of the irregularity of the lesser curvature. The treatment was continued and 6 weeks later an X-ray (Fig. 3) showed almost complete disappearance of the defect on the lesser curvature, as well as the ulcer crater.

This case is interesting because the pain in the chest continued for 2½ years and its significance was completely overlooked. Notwithstanding the radiological finding of a gastric ulcer possibly associated with a neoplasm, the lesion turned out be be a benign gastric ulcer only.

Case 2

In December 1957 Mr. J. E. Ellison was called upon to operate in an emergency for a massive haematemesis in a man aged 61, who 18 months previously presented the symptom of pain in the chest, the import of which was overlooked, and in whom it was only a few months before the operation that a gastric ulcer of the lesser curvature was discovered. At operation a carcinoma was found, involving a large part of the stomach as well as the site of the gastric ulcer of the lesser curvature. Gastrectomy was performed, and the patient now feels relatively well.

Here again the chest pain, which persisted for 18 months, was overlooked and only properly assessed much later. Had a diagnosis of gastric ulcer been made at the time of onset of the chest pain, the patient would probably have been completely cured, and the present serious situation avoided.

Case 3

A man, 63 years old, a patient of Dr. B. van Lingen, had complained for some time of pain in the left side of the chest. When he coughed he occasionally had pain in the upper part of the abdomen. He was suffering from diabetes and taking tolbutamide. In spite of circulatory troubles in the legs he could walk, but when he climbed hills he used to get pain in the calves. He described his chest pain as a pressure and an ache. The pain had remained similar in character since its initial onset. It might last 10-15 minutes, and then might disappear for a period of 30 minutes up to a day or two. Walking never used to precipitate pain, and even when it was present it was not aggravated by exertion. His appetite was fair and there was no indigestion or any other gastro-intestinal symptoms. He had lost weight in the past few weeks. He showed no distress. The pulse was normal and the blood pressure 155/80 mm. Hg. There was no abnormal precordial pulsation. A soft systolic murmur could be heard at the aortic area. Abdominal examination was negative, except for some tenderness over the duodenal cap or possibly the gall-bladder. The ECG, at rest, showed depression of the ST segment over the left chest leads. A mild effort exaggerated this depression.

The diagnosis in this case was diffuse arterial damage, with some coronary disease. According to Dr. van Lingen, the chest

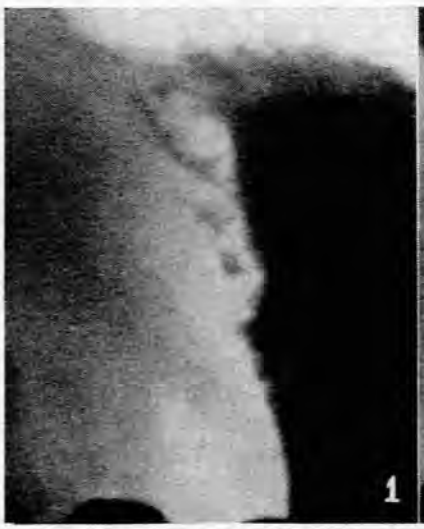

Fig. 1. Case 1, 16 May 1958.

Fig. 2. Case 1, 11 June 1958.

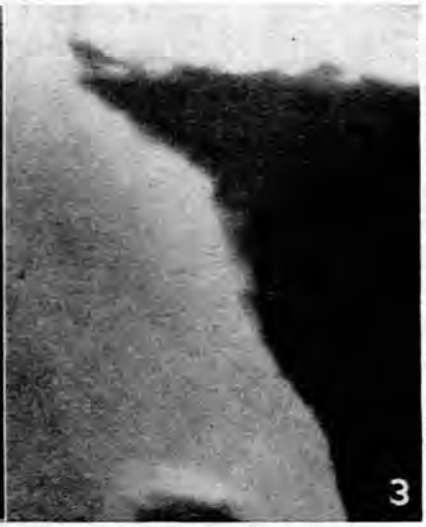

Fig. 3. Case 1, 26 July 1958.

Fig. 4. Case 3, 16 June 1958.

Fig. 5. Case 3, close view, 16 June 1958.

Fig. 6. Case 3, after insufflation, 16 June 1958.

pain was not associated with his heart condition. The only feature which might have suggested that this pain was of cardiac origin was the fact that it sometimes appeared soon after meals. On the other hand, exertion did not produce or aggravate the pain. A gastric condition was therefore suspected and a barium-meal test was performed.

The barium-meal X-ray examination gave the following results (Figs. 4, 5 and 6): (1) The erect oblique view of the stomach demonstrated a translucent defect in the upper lesser-curvature aspect of the stomach; serial views of this aspect revealed the presence of a space-occupying lesion with associated ulceration; and air inflation of the fundus of the stomach demonstrated a space-occupying lesion. (2) Serial views of the duodenum showed evidence of an active duodenal ulcer on the posterior wall. The lesion on the upper lesser-curvature aspect was considered to be either a neoplasm with associated ulceration or a benign ulcer associated with a granulomatous process. Laparotomy was advised and the patient went to London, where he was operated on by Mr. Tanner, who found a large ulcerated mass on the lesser curvature of the stomach. The neoplasm was removed and on microscopic examination was found to be a leiomyosarcoma. There were no metastases.

This case is interesting because chest pain was found in a patient with a well-established cardiac condition. The chest pain had probably been diagnosed as anginal in character. The pain was neither produced nor aggravated by exertion and there were no gastro-intestinal symptoms except for some tenderness over the duodenal cap or the gall-bladder. If the diagnosis had been made sooner, when the chest pain first appeared, the outlook might have been more favourable. Fortunately in the absence of metastases the prognosis is favourable.

Chest pain in coronary disease is a common symptom, but it does not follow that every chest pain in a patient with coronary disease is of cardiac origin. This case is a reminder that a gastric ulcer may be present alongside coronary disease and may cause chest pain.

SUMMARY AND CONCLUSIONS

1. In my previous communications[1, 2] I reported the syndrome of chest pain, not necessarily accompanied by gastric symptoms, as an indication of gastric ulcers situated high on the lesser curvature. These ulcers remain silent for a considerable period and are prone to become malignant. Chest pain that cannot be otherwise explained after a detailed investigation should raise a suspicion of gastric ulcer of the lesser curvature; and if X-ray examinations remain negative after repeated barium meals, exploration laparotomy is indicated.

2. Three cases of gastric ulcer are now presented, in two of which X-ray examination showed lesions suggesting neoplasm or granulomatous process and one was associated with coronary disease. Attention is drawn to the significance of chest pain caused by gastric ulcer in the presence of coronary disease.

I wish to thank Dr. B. van Lingen and Mr. J. E. Ellison for permission to publish their cases and Dr. Michael Denny for the X-ray reproductions.

ADDENDUM

Since this article was written the following case of Mr. W. Kark's has come to my notice:

A man aged 26 years complained of high chest pain on the left side below the clavicle and pain in the back below the left scapula. He had no gastro-intestinal symptoms. The diagnosis of intercostal neuralgia was made and the patient received local injections of hydrocortisone, but the chest pain did not subside. It was later suggested that the pain might be due to angina pectoris, and he was then treated for that condition; at the time no ECG was taken. Shortly afterwards the patient developed intense pain, his condition suggesting a perforation episode. An emergency operation was performed, revealing a perforated gastric ulcer situated high on the lesser curvature. The patient is now doing well.

This case presented the characteristic syndrome of pain in the chest without gastro-intestinal symptoms. Nevertheless the significance of the syndrome was overlooked and other diagnoses were made, until the dramatic episode of gastric perforation intervened. Had the syndrome been properly assessed at the time, all the later complications might have been avoided. It is possible that the administration of hydrocortisone provoked the perforation of the gastric ulcer.

REFERENCES

1. Shedrow, A. (1957): S. Afr. Med. J., **31**, 802.
2. *Idem* (1958): *Ibid.*, **32**, 168.
3. Buch, J. (1958): Med. Proc., **4**, 349.