CLINICAL RECORDS

ŒSOPHAGO-AORTIC FISTULA

By GUY THOMPSON (Scarborough)

PEPTIC ulceration of the œsophagus has frequently been described. Perforation of such ulcers into the mediastinum is not very uncommon. Indeed, it has been suggested that at least some of the cases reported as spontaneous rupture of the œsophagus have, in fact, been perforations of an active ulcer. A search of the literature and wide enquiry, however, have not revealed a recorded case of perforation of such an ulcer into the aorta, thus causing an œsophago-aortic fistula. Such a case is now reported, both as being of interest and also to serve as a warning when taking a biopsy from such an ulcer.

11.2.54. A patient, aged 67, attended medical out-patients with a history of "epigastric and lower sternal pain on both sides and between the shoulder blades", intermittently for four years but constantly for two months. The physician asked for an X-ray examination and the report was as follows: "An abnormality is present at the lower end of the œsophagus. . . . The deformity probably follows an œsophageal ulcer. The absence of spasm was against an acute ulcer being still present. It would be wise to perform an œsophagoscopy."

15.4.54. He was X-rayed, having been admitted to the medical wards early in April with a cough and chest symptoms. The report stated: "A pneumonitis appears to be present at the right base."

25.4.54. The patient was submitted to œsophagoscopy and the following report was made: "At extreme lower end of œsophagus there is a wide dilatation above a constant narrowing which is very hard and has an ulcer on the right lateral wall. In view of this hardness it was felt that the ulcer might be malignant, although it did not look to be so, and therefore a biopsy was taken."

The Pathologist's report was as follows: "An inflamed connective tissue core surmounted by a layer of columnar epithelium containing numerous goblet cells. Some of the deeper glands are cystic and the general appearance is polypoid. At one point there is evidence of early ulceration. There is no squamous epithelium in the specimen and the changes are those of an area of gastric heterotopia."

The man improved with a milk drip and was later discharged to attend out-patients.

10.5.54. He was X-rayed again and the report read: "Appearance approximately similar to those of *11.2.54.* . . . slight dilatation of the œsophagus above the stricture. Appearances may be those of chronic ulceration but obviously impossible to exclude neoplastic change." His symptoms recurred and he was again X-rayed and the report was: "There is now a small rounded filling defect in the lower œsophagus. The œsophagus below this point is slightly

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narrower than on previous occasions. The appearances are now more suggestive of neoplasm."

19.6.54. As a result of this report a further œsophagoscopy was requested, and the following report was made: "The extreme lower end of the œsophagus bled easily on touch all over its surface and was markedly red with quite abnormal mucosa. No ulcer or growth seen." No biopsy was taken. The man was again put on medical treatment and improved and went home.

27.7.54. He was X-rayed again after the symptoms had developed once more. It was reported that: "There is more irregularity . . . suggesting neoplastic change."

21.10.54. Œsophagoscopy was again performed, as the patient's symptoms had continued and he had to be re-admitted to hospital. The report was: "Appearances are almost identical with those reported on 25.4.54. The large red, raw, velvety appearance of the lower end persists." No biopsy was taken. The man was again sent home after medical treatment.

24.1.55. He had a hæmatemesis at home at about 6.0 a.m. and was sent to hospital. He was almost pulseless and his blood pressure could not be recorded. He was *in extremis* and died shortly after. A post-mortem examination was made and the report was as follows:

"Œsophagus. The lower $3\frac{1}{2}$ in. of the œsophagus presents a red appearance compared with the paler more proximal part, suggesting ectopic gastric mucosa. $1\frac{1}{4}$ in. proximal to the gastro-œsophageal junction there is an ulcer together with surrounding induration in the anterior œsophageal wall. The ulcer has perforated through the wall of the aorta and produced an aortic-œsophageal fistula. Stomach and intestines are distended with blood clot. Aorta showed slight atheroma. Other organs were normal."

The œsophagus contained about a pint of blood and the stomach and intestines about $3\frac{1}{4}$ pints. The cause of death was hæmorrhage due to perforation of a peptic ulcer of the œsophagus into the thoracic aorta.

Comment

This case demonstrates how easily at any time in the last few months of the patient's life a biopsy of the ulcer crater might have caused a result similar to that produced by the pathological condition itself, and emphasizes the care that must be exercised in taking biopsy material from these ulcers.

The case was under the care of Dr. Woodrow in the medical wards. To him I am indebted for inviting me to do the œsophagoscopies. Dr. Brewis and Dr. Muir made the X-ray examinations and reports; Dr. Froome made the histological examinations and reports on the biopsy material, and Dr. Whitehead made the post-mortem examination and report. To all of them I am indebted for their co-operation.

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