The discovery of a hiatus hernia in association with a lower oesophageal or cardiac carcinoma is not uncommon.

Sweet (1948), in a discussion on hiatus herniae, mentions that in 13 per cent. of his cases of cardiac carcinoma a hiatus hernia was present as well. Smithers (1945) reviewed the literature on this subject, adding four cases of his own. Brick (1949), in discussing combined gastric lesions concluded, from a radiological study of a large number of patients, that if a gastric neoplasm was present with a hiatus hernia it was likely to be at the cardia. A recent striking example of the dual condition was encountered at the Queen Elizabeth Hospital and the case histories and findings reviewed of the previous 100 cases of oesophageal carcinoma seen by one unit in the period 1948 to 1954. It was noted that a hiatus hernia co-existed in ten patients, in all of whom the growth was either lower oesophageal or cardiac in site. The features of these ten cases are set out in tabular form.

Case Report

Mrs. E. S., aged 72, admitted October 14, 1953. She had been quite well until four months prior to admission when she gradually became unable to swallow solids. Her dysphagia was painful and the pain radiated into her back. She regurgitated solid food soon after swallowing and said that she had lost much weight. Previously she had been treated for pernicious anaemia.

On clinical examination no abnormality could be detected but at oesophagoscopy on the day of admission she was found to have a diffuse lower oesophageal stricture. Bougies were passed to relieve her dysphagia and four days later a barium swallow was performed, the patient being tipped into the Trendelenberg position with the barium...
<table>
<thead>
<tr>
<th>Case No.</th>
<th>Age</th>
<th>Sex</th>
<th>History</th>
<th>X-ray and Endoscopic Findings</th>
<th>Operation</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>78</td>
<td>M</td>
<td>3 months progressive dysphagia and weight loss. Regurgitating feeds.</td>
<td>Long 'malignant' lower oesophageal stricture with oesophageal reflux below it. (No biopsy report available.)</td>
<td>The cardia lay within a sliding hiatus hernia and was involved by a growth. Oesophagogastrostomy was performed.</td>
<td>Recovered.</td>
</tr>
<tr>
<td>2</td>
<td>55</td>
<td>F</td>
<td>Vague dyspepsia for years. Sudden onset of dysphagia for six months prior to admission. Pain in the chest, weight loss and regurgitation of feeds with minor haematemeses.</td>
<td>Long lower oesophageal irregularity terminating in a cardiac stricture due to carcinoma. A hiatus hernia, with reflux, was present below the growth. Biopsy 'anaplastic carcinoma of gastric origin.'</td>
<td>Carcinoma of the cardia within a sliding hiatus hernia. Inoperable.</td>
<td>Died.</td>
</tr>
<tr>
<td>3</td>
<td>85</td>
<td>M</td>
<td>6 months progressive painful dysphagia. Regurgitation of feeds. Some abdominal pain.</td>
<td>Smooth lower oesophageal stricture with a small ulcer below it. Considerable upper oesophageal dilatation. Reflux of barium occurred into the gullet below the stricture. Biopsy 'Squamous carcinoma of the oesophagus.'</td>
<td>Nil.</td>
<td>Died.</td>
</tr>
<tr>
<td>4</td>
<td>75</td>
<td>M</td>
<td>20 years of nocturnal regurgitation. 15 years of dysphagia and 2 months of severe dysphagia—able to swallow fluids only.</td>
<td>Lower oesophageal ulcerating stricture with superimposed oesophagitis. Below this was a hiatus hernia. Biopsy 'Adenocarcinoma of the lower oesophagus.'</td>
<td>Carcinoma of the cardia within a hiatus hernia. Oesophagogastrostomy performed.</td>
<td>Recovered.</td>
</tr>
<tr>
<td>5</td>
<td>62</td>
<td>M</td>
<td>3 years of slowly progressive dysphagia; elsewhere a 'simple' stricture had been repeatedly dilated up.</td>
<td>Irregular lower oesophageal stricture. (No barium studies performed.) Biopsy 'No evidence of carcinoma.'</td>
<td>Carcinoma of the cardia within a hiatus hernia. (Neoplasia confirmed by section of specimen later). Roux-en-Y oesophagojejunostomy.</td>
<td>Died on 7th postoperative day from gangrene of Roux loop.</td>
</tr>
<tr>
<td>6</td>
<td>53</td>
<td>M</td>
<td>6 months progressive dysphagia. He had acrocyanosis and sclerodactyly.</td>
<td>Long mid and lower oesophageal stricture due, apparently, to a neoplasm. No biopsy report available. A hiatus hernia was present as well.</td>
<td>Unfit for operation.</td>
<td>Died.</td>
</tr>
<tr>
<td>7</td>
<td>51</td>
<td>F</td>
<td>Post prandial discomfort for some years but dysphagia for 9 months. Dysphagia progressive. Alkalies relieved her symptoms.</td>
<td>Lower oesophageal stricture with, above it, dilatation of the gullet and shallow ulcer. A hiatus hernia was present below the stricture. (No biopsy report available.)</td>
<td>Mobile 'tumour' of the cardia within a hiatus hernia. Roux-en-Y oesophagojejunostomy.</td>
<td>Recovered.</td>
</tr>
<tr>
<td>8</td>
<td>49</td>
<td>M</td>
<td>9 months of progressive dysphagia.</td>
<td>Stricture of the lower oesophagus. Biopsy 'Adenocarcinoma of oesophagus.'</td>
<td>Carcinomatous cardi within a hiatus hernia. Oesophagogastrojejunostomy with entero-anastomosis performed</td>
<td>Recovered.</td>
</tr>
<tr>
<td>9</td>
<td>72</td>
<td>M</td>
<td>10 weeks of painful progressive dysphagia.</td>
<td>Lower oesophagus obstructed by a mass protruding into the lumen from its posterior wall. Biopsy 'Poorly differentiated carcinoma of gastric origin.'</td>
<td>Carcinoma of the cardia within an extensive sliding hiatus hernia. Inoperable.</td>
<td>Died. Bronchopneumonia.</td>
</tr>
<tr>
<td>10</td>
<td>74</td>
<td>M</td>
<td>3 months of progressive dysphagia.</td>
<td>Irregular stricture of the lower oesophagus. (No biopsy report available.)</td>
<td>Carcinoma of the cardia within a hiatus hernia. Oesophagogastrostomy performed.</td>
<td>Recovered.</td>
</tr>
</tbody>
</table>

In the stomach. The report on this X-ray was as follows: 'The oesophagus is tortuous and narrowed for 3 in. above the hiatus. The appearances suggest a hiatus hernia containing a neoplasm.' (Figs. 1 and 2.)

Two days later her dysphagia worsened—she could not swallow high protein liquid feeds and it became necessary to perform of Witzel jejunostomy. She quickly improved following this operation.

A month later a left thoracolaparotomy was performed: the seventh left rib was removed and the incision carried across the costal margin to the umbilicus. A large sliding hiatus hernia was found. The cardia, involved by a mobile growth, lay within it. The cardia was halfway up to the aortic arch. No enlarged glands were noted and an oesophagogastrostomy was performed after the growth had been excised with comparative ease. The mediastinum was closed around the anastomosis and the chest closed after an underwater sealed tube had been inserted. She made an uninterrupted recovery.
Pathological report on the specimen: 'There is an extensive poorly differentiated adenocarcinoma of the cardiac end of the stomach. The lower end of the oesophagus is lined with gastric type epithelium, the neoplasm infiltrating to within four millimetres of the upper level of excision. The neoplasm is infiltrating all coats of both stomach and oesophagus and the paracardiac lymph glands are involved.'

Discussion
Statistically it would appear that the finding of a cancer within a hiatus hernia is more than fortuitous and that one of the lesions may predispose to the development of the other. It is conceivable that a single factor, oesophagitis, may be in operation resulting in fibrosis, peri-oesophagitis, hiatus hernia formation and eventually in carcinoma. There are, however, many arguments against such a theory. It was noted that in only two of the cases collected here did the history extend over a period of nine months and oesophagitis without symptoms is rare (Collis). That fibrosis and peri-oesophagitis can cause shortening is even open to doubt when one considers how few cases of simple caustic oesophageal stricture sustained in childhood develop hiatus herniae in later life (Marchand). Freedom from fibrosis and mobility of the growth was a feature of a number of the cases reported here. This mobility makes for ease in resection, should this be feasible.

Evidence suggests, therefore, that the carcinoma is the initial lesion. Olsen (1945) believes that invasion of the lower oesophagus by a gastric neoplasm causes oesophageal shortening. He suggests that direct or indirectly induced spasm of the gullet may be a factor in the formation of hiatus herniae.

Smithers (1950) also suggests that a cardiac neoplasm, by spasm, may drag a puch of stomach into the chest. Many observers, however, doubt the influence of locally induced oesophageal spasm on the formation of hiatus herniae and the conclusion reached is that a cardiac or lower oesophageal neoplasm by local invasion may so shorten the oesophagus that a hiatus hernia may develop.

Summary
Eleven cases are recorded of carcinoma of the cardia and lower oesophagus within a hiatus hernia.

The occurrence of the two conditions together is believed to be far from rare. The influence of cardiac neoplasm on the development of a hiatus hernia is discussed.

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BIBLIOGRAPHY

ALLISON, P. R. (1949), Lancet, 137, 91.
CHRISTIANSEN, H. (1941), Acta Radiologica, 22, 360.
DUNHILL, T. (1943), 'Harveian Oration.'
HARRINGTON, S. W. (1940), Amer. J. Surg., 1, 381.
JACOBS, L. G. (1938), Amer. J. Roentgenol., 40, 381.
MARCHAND, P. (1955), Thorax, 10, 171.
PACK, G. T., BUTLER, F. and KATZ, E. (1952), Ibid., 23, 593.

Manufacturers' Note

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Carcinoma in Hiatus Herniae

A. M. Wiley

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