SIMPLE CONDITIONS OF THE OESOPHAGUS SIMULATING CANCER

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When an elderly patient complains of dysphagia of recent onset suspicion is immediately aroused that the underlying cause is malignant, and further investigation usually confirms this suspicion. In recent years, however, an increasing number of patients are found to be suffering from what proves to be a simple condition. The onset of the dysphagia and the previous history of these patients usually give an indication that the cause may be benign, and at the present time strictures due to reflux oesophagitis are frequently diagnosed and treated.

In the cases described below the situation was somewhat different. In each the nature of the symptoms and the radiological appearances deceived experienced surgeons into making a confident diagnosis of cancer. Three of the patients were considered unsuitable for radical cancer surgery, and in every case the dysphagia was so severe that, left untreated, death would appear to have been inevitable. These four patients have come under my care within the last 12 months.

Case 1

In May, 1953, a man aged 69 was transferred from another hospital, where a diagnosis of carcinoma of the lower third of the oesophagus had been made. He gave a history of progressive dysphagia for twelve months and a loss of 2 st. (12.7 kg.) in weight over the same period. In January, 1953, he had had a perforated peptic ulcer which was treated by suture.

On admission to Hammersmith Hospital he was given a fortified liquid diet, but his swallowing gradually deteriorated, and it was necessary to carry out a gastrostomy on May 29. Following this his swallowing improved and a combination of mouth and gastrostomy feeding was instituted. The fact that he had had a perforated peptic ulcer raised the possibility of a simple cause for his dysphagia, but he was very kyphotic and it was thought unwise to attempt oesophagoscopy.

On June 16 exploration was made through a left abdomino-thoracic incision. The lower end of the thoracic oesophagus was grossly thickened, but the stomach appeared to be normal. The lumen of the oesophagus was opened to confirm the nature of the stricture and was found to be narrowed to a diameter of 2 mm., but there was no evidence of cancer. The lower third of the oesophagus and a large part of the lesser curvature of the stomach were excised and continuity was restored by anastomosing a loop of small bowel to the cut end of the oesophagus.

The patient made an uninterrupted recovery, and is now eating all types of food and gaining weight.

Subsequent histological examination of the oesophagus showed that the lumen would just admit a 2-mm. probe and the oesophageal wall at this point was 14 mm. thick, the greatest increase being in the submucosa.

The lumen in the section measured 3 by 2 mm. and had lost its epithelium, being lined by non-specific granulation tissue made up of young capillaries, fibroblasts, polymorphs, macrophages, and lymphocytes. Outside this layer and replacing the submucosa was a layer of collagen, 5 mm. thick, infiltrated with plasma cells, polymorphs, and eosinophils.

The picture was that of a chronic non-specific oesophagitis with stricture formation. No evidence of malignancy was seen.

Case 2

A man aged 79 was admitted to hospital in August, 1953, with acute dysphagia for three days. There was no previous history of indigestion.

On examination he was very dehydrated and his blood pressure was 100/75. Barium swallow showed obstruction at the lower third of the oesophagus, probably malignant. X-ray examination of the chest showed a calcified aorta and emphysematous lungs. An electrocardiogram indicated possible ischaemic changes. In view of these findings oesophagoscopy was not undertaken.

A fortified liquid diet was given and on September 24 he was taught to swallow gum-elastic bougies. With this treatment his swallowing rapidly improved. He has continued to maintain his improvement, and it is probable that the cause of his dysphagia was a simple condition.

Case 3

A woman aged 84 was admitted in October, 1953. She had had epigastric pain for five months and regurgitation of solid food for three months. Her general health had always been remarkably good until the last few months, when she had been losing weight. A barium swallow and meal had been carried out at another hospital, where the condition was diagnosed as carcinoma of the fundus of the stomach, but in view of her age no treatment was considered practicable and she was sent home.

The increase in her dysphagia led to her being admitted to Hammersmith Hospital, where she was given a fortified liquid diet. After four days a fresh x-ray investigation was carried out and the condition was seen to be one of cardio-spasm. In view of her age it was decided to pass a Hurst mercury bougie without carrying out a preliminary oesophagoscopy. The mercury bougie was introduced with ease and her swallowing rapidly improved. On discharge from hospital on November 6 she was eating a normal diet and gaining weight. At the time of writing she has had no further dysphagia.

Case 4

A man aged 79 was admitted in June, 1953, with a history of increasing dysphagia of 18 months' duration, and during this time he had periods of remission lasting as long as a month when food could be swallowed normally. During the week before admission he had almost complete dysphagia and found it very difficult to take even fluids.

On examination kyphosis was observed, but apart from his loss of weight there were no other abnormal physical signs. A barium swallow showed a short stricture just below the arch of the aorta, with some proximal dilatation. The stricture appeared to be simple in nature.

In view of his age and the presence of kyphosis, oesophagoscopy was considered to be dangerous, and a mercury bougie was introduced which passed through the stricture with unexpected ease. Following the passage of the bougie he was able to swallow normal food and was discharged on July 3, passing the bougie once a day. When seen on January 1, 1954, he was eating all kinds of food, including meat, and was swallowing his bougie once a week.

This case appears to be an example of simple spasm occurring in the middle of the oesophagus.

Summary and Conclusions

Four cases are described in which the symptoms and radiological signs have led to an erroneous diagnosis of cancer of the oesophagus.

In each case the experienced surgeon or radiologist who made the diagnosis was well aware of the possibility of a simple condition simulating cancer, but in spite of this was misled.

The mistake is likely to occur when confirmatory oesophagoscopy is contraindicated, and in such cases a second x-ray examination carried out after the patient has been restricted to a fortified liquid diet may be of help. In other cases it may prove necessary to carry out an exploration.

The possibility of a simple condition simulating carcinoma must be remembered in assessing the results of treatment by irradiation when it has not been possible to confirm the diagnosis by biopsy.

Medical Memoranda

A Case of Trichlorethylene Addiction

In view of the wide use of trichlorethylene ("trilene"), both in commerce and in medicine, the following description of a case of addiction is of interest. Similar cases have been described, though none, so far as I am aware, involving such medico-legal and psychiatric implications as in this case.

Trichlorethylene is a halogen hydrocarbon bearing the formula $\text{CHCl}_2\text{CCl}_2$. It is subject to decomposition under the influence of heat or light, one of its breakdown products being dichloroacetylene, a very volatile substance. The latter, when experimentally injected into rabbits, has produced encephalitis. When used for therapeutic purposes trichlorethylene is kept in brown stoppered bottles, or in sealed tins, in order to avoid the danger of decomposition. When used as an anaesthetic it should be coloured in order to distinguish it from chloroform. It would appear that smoking in the presence of trichlorethylene vapour encourages the inhalation of an irritant breakdown product of the drug.

Uses.—One of the commercial uses of trichlorethylene is as a dry-cleaning and degreasing agent. It is with the use of the commercial product that the present case arose. In its purified and stabilized form ("trilene") it is used as an anaesthetic for general surgery and as an analgesic in obstetrics. In ordinarily skilled hands it provides a safe method of induction. The drug has recently come into use in psychiatric clinics as an abreaction agent. The patient holds the mask himself and is told to breathe in. As soon as relaxation of the musculature occurs he is encouraged to try to recall his experiences. His reminiscences are vividly recounted, and he appears to be reliving many of the traumatic events in his life. Used in these ways, the drug is perfectly safe. Lastly, it is used, legitimately and safely, for sniffing in cases of trigeminal neuralgia, up to 4 ml. a day being the optimum quantity.

Psychosomatic Effects.—Apart from surgical anaesthesia, mention should be made of certain side-effects sometimes encountered, and also of the long-term results of excessive use or of use spread over long periods. Some of the cases of chronic poisoning with trichlorethylene in commercial undertakings may well have been attributable to impurities rather than to trichlorethylene itself. Symptoms have included giddiness, vomiting, optic neuritis, disturbances of sensation, and peripheral neuritis. After anaesthesia with trichlorethylene psychosomatic symptoms are sometimes reported, though they are usually slight and evanescent. In the main, they are of the nature of headache, nausea, vomiting, and mental confusional states. Amnesia is said to follow its use in some 20% of cases in which it was self-administered in obstetrics. Addicts who had been using from 120 to 180 ml. a day showed mental changes, mainly in the direction of hypomanic phases and disorientation, but these cleared up rapidly when the habit was broken off. Tremor, nausea, emotional lability, mild delirium, sometimes with frightening hallucinations, have been reported, and have been attributed to breakdown products, perhaps phosgene.

CASE REPORT

The patient, a young man aged 25, lived alone with his mother on terms which, in the opinion of those who knew both well, were happy. His parents separated during his very early childhood. The history of his addiction to anaesthetics generally is briefly as follows. At the age of 18 he held the post of orderly in a hospital, where his duties included the care and management of the theatre trolley. He became obsessed with the speculation of "trying out by way of experiment, and just to see what it felt like," one of the anaesthetics, his first choice falling on the nitrous oxide apparatus. After a while he switched over to ethyl chloride, because this had the double advantage of being put up in a spray bottle and needing only a handkerchief for its administration. Of this he took "a very large quantity, and the sensation soon became a habit." But once more he tired of its action and turned his attention to pure ether. He had by now reached the stage of craving for "the sensation of sleep and oblivion," and had begun to take the drug home with him in order to be able to use it in bed. This went on for more than two years, and it appears that on many occasions trouble had arisen between his mother and himself over the use of what she had described as "suicidal drugs."

It was about this time that he left the hospital and entered a works, where his job consisted of cleaning electrical equipment with semi-crude trichlorethylene. For a little while he did not miss the anaesthetics too much. But presently the old compulsion made itself felt again, and this time he turned to trichlorethylene, handy, accessible, and copious as it was. He quickly discovered that its action was very much like that of ethyl chloride (for his specific purpose, that is), and he soon established the habit of soaking his handkerchief with it at any odd time of the day, but more especially at bedtime. He would fill a pint—and later a quart—bottle with it and take it home. At bedtime he would soak a cloth with the trichlorethylene, put it over his nose and mouth, and then draw the bedclothes over his head, thereby providing himself with a good imitation of the closed method of induction. Eventually he would fall sound asleep. In the morning, however, he felt depressed and his limbs felt "just as if they were covered with a rubber glove; all my sensations were blunted."

This addiction had lasted for some three years or more, when one night, after what must have been a regular trichlorethylene debauch, he experienced a state of mind which he described as a "queer sort of elation; everything seemed clear, but strange; I felt highly amused at nothing in particular, and I wanted to burst out laughing." This was followed the next morning by a depressive episode, coupled with blunted skin sensations. He returned to his bedroom for more trichlorethylene. On coming downstairs again he picked up a kind of heavy stick in the scullery and viciously beat his mother with it. She died of her injuries within a few hours.

Thirty minutes later he was found, disoriented, in a street near by. His behaviour was then so violent that the police were obliged to strap him down to the ambulance couch. He was, however, aware of what he had done and kept repeating that he had killed his mother. Some three hours after his maniacal outburst he had calmed down and was able to give a much-restricted account of what had happened that morning. It should be mentioned that at that time he was doing night duty and that his sleep induction would therefore take place somewhere about eight in the morning.

The prosecution accepted a plea of manslaughter whilst under the influence of a narcotic drug.

COMMENT

As this man had indulged in trichlorethylene inhalations for three years without precipitating a clinically ascertainable psychosis, it must be assumed that during the few hours