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CONGENITAL TRACHEOESOPHAGEAL FISTULA WITHOUT ATRESIA: AN INCIDENTAL FINDING*

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A four-year-old boy who had a long history of upper respiratory tract infections and growth retardation was admitted because of recurrent abdominal pain. During upper gastrointestinal series to search for a gastric or duodenal ulcer, the examiner noticed a minute amount of contrast medium within the trachea. Repeat esophagography on an angiographic table led to the correct diagnosis of a congenital H-type fistula. The patient did not have the classical symptoms of a history of choking and cyanosis after feeding during infancy or recurrent lower respiratory tract infections. The only finding consistent with a fistula was growth retardation, and the diagnosis was established incidentally during a work-up for abdominal pain. *Key words: tracheosophageal fistula, without atresia.*

Congenital tracheoesophageal fistula (TEF) without atresia (H-type fistula) comprises three percent of TEF[1]. Coughing, choking and cyanosis after feeding are the most common presenting features, followed by recurrent pneumonia. It is usually detected within the first year of life, but symptoms may persist until adulthood before the correct diagnosis techniques have been advocated, because identification of the fistula can be elusive and operating on suspicion alone is unwise[3].

An H-type fistula was diagnosed incidentally in a four-year-old boy presenting with recurrent abdominal pain of one-month duration.

Case Report

A four-year-old boy was admitted to the hospital for recurrent abdominal pain of one-month duration. The pain was transient and worse after meals. He did not have nausea or vomiting, and he had normal bowel habits. Physical examination of the chest and abdomen, chest x-ray and routine laboratory findings were normal. He had been followed for growth retardation at this hospital

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for two years. On the present admission, his weight and height were at the third percentile and third to tenth percentile, respectively. His skeletal age was consistent with three years. His history included upper respiratory tract infections with coughing after the first year of life. On each admission for this complaint, physical examination of the chest was normal and chst x-rays were negative for a parenchymal infiltrate.

Upper gastrointestinal series to search for a gastric or duodenal ulcer did not reveal any pathological findings in the stomach and small intestine, but leakage of the contrast medium (barium sulfate) to the trachea was noted after swallowing of the contrast medium. Although this finding can be due to aspiration of the contrast medium, a fistula between the esophagus and trachea was suspected, and esophagography was performed using digital substraction angiography on the following day.

A feeding tube was inserted from the nose into the esophagus to the level of the third thoracic vertebra with the patient lying prone on the table. Thirty mililiters of diluted contrast medium, barium sulfate, was injected manually, and serial films at three exposures per second were obtained. The examination revealed a fistula tract running anteriorly and cranially from the esophagus to the trachea at the level of the second thoracic vertebra (Fig. 1).

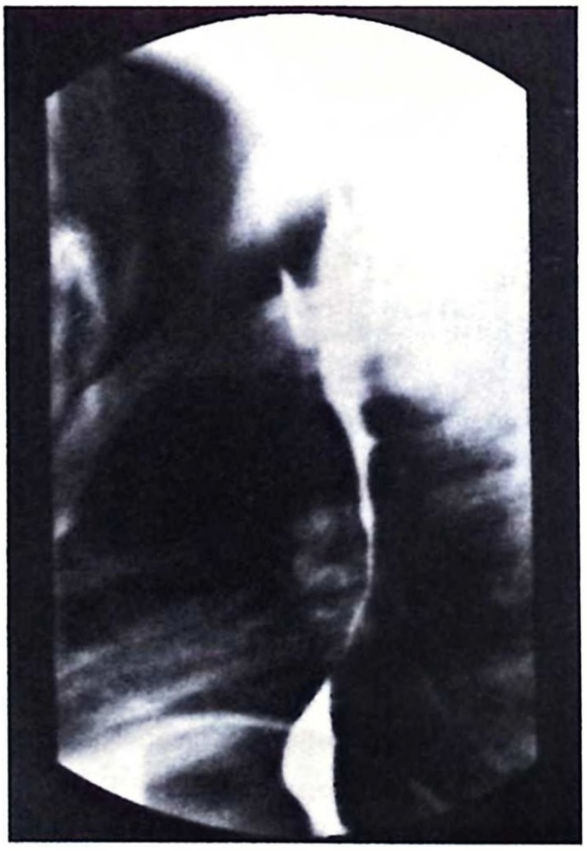

Fig. 1: Fistula tract running cranially from the esophagus to the trachea.

The patient was operated on and the fistula was ligated and excised. He had an uneventful post-operative course and was well with no symptoms at the six-month follow-up.

Discussion

It is a rare occasion for a surgeon to see a patient with an H-type fistula. For this reason, it is important to consider the diagnosis of H-type fistula from the clinical features. H-type fistula should be suspected in an infant with choking, coughing and cyanosis caused by aspiration after feeding, recurrent pneumonia with excessive tracheal secretions and abdominal distention caused by air in the stomach[4]. Relief of symptoms with a gastric tube feeding may occur, and long-term growth retardation is not an unusual finding. Although these symptoms could arouse suspicion of an H-type fistula, patients with aspiration, reflux esophagitis and palatopharyngeal dyskinesia may demonstrate similar findings[5].

The patient presented here was not at the usual age and did not show the classical symptoms and signs of TEF. He had recurrent upper respiratory tract infections with coughing after one year of life, but on each admission, the lungs were clear to percussion and auscultation and the chest x-ray was normal. The only finding consistent with a fistula was growth retardation, the cause of which could not be found for the preceding three years.

Since congenital TEF occurs rarely and may go unnoticed into adulthood, diagnosis is difficult. Esophagography is a simple means of detection for those patients. It may not be diagnostic because of technical limitations, especially if the fistula is a small one, but may lead the radiologist to suspect a fistula. Cineesophagography or esophagography performed on an angiography table is usually diagnostic and should be performed in every child with a history of coughing, choking and growth retardation or a child with a questionable esophagography.

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