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Congenital Esophageal Cyst

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The four congenital esophageal cysts were clinically evaluated. Their locations were lower third of the esophagus in 3 and middle third in one respectively.

Most of them had no particular symptoms and all were surgically removed without a resection of the circumference of the esophageal wall. Histologic examination revealed ciliated columnar epithelia. Only in one was there the cartilaginous component, which was very scanty as would not be considered bronchogenic cyst. The categories of the esophageal cyst have remained controversial and uncertain in the genesis of bronchogenic cyst.

INTRODUCTION

It is clear that the esophageal cyst is congential in origin, which is arising from the primitive foregut.

It has been called intramural esopnageal cyst, primitive foregut cyst and/or esophageal duplication cyst. To date, this disease is so rare in occurrence that the clinical features of the four cases experienced in our surgical department are clinically analyzed.

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RATIENT

Two hundred forty-three patients with esophageal tumors were surgically excised for the past 20 years from 1966 to 1985 as shown in Table 1. Eleven cases of them were benign tumors, 6 leiomyoma, 4 congenital cyst and 1 hemangioma respectively. There was no main symptom in three except for one in whom dysphagia and discomfort in the epigastrium sometimes occurred when had taken solid food quickly.

The four cases were detected by routine chest x-p examination and esophagogram as illustreted in Fig. 1.

Ages ranged from 16 to 47 with an average of 32.5 years. The distribution of sex not particular in a ratio of 2 to 2 as indicated in Table 2. The tumor locations were lower third of the esophagus in 3 and middle third in 1. The right sides were predominant in 3.

The sizes of the four cysts also ranged from 3 to 6cm as shown in Table 3. Histologic examinations revealed that these were composed of ciliated columnar epithelium and only in one was the cartilaginous component recognized. The diagnosis was made bronchogenic cyst in one and duplication cyst in the other three. Malignancy was not detected in our four cases.

Surgical excisions were made in all four cases. The operative approachs were right thoracotomy in three and left in one. All of the cysts were excised with use of an enucleation technique without a resection of circumference of the esophageal wall.

Histologic examinations confirmed in the four cases in whom ciliated columnar epithelia existed and there were no cartilaginous components in three except one as revealed in Fig. 2.

Postoperative courses in all were uneventful without any complications. All of the

Table 1. Esophageal tumor (1955-1985.8)

Esophageal tumor	No. of Patients	%	
Esophageal carcinoma	232	95.5	
Benign esophageal tumor	11	4.5	
Leiomyoma	6		
Cyst	4		1.6(36.4)
Hemangioma	1		
Total	243	100	

patients were alive and well.

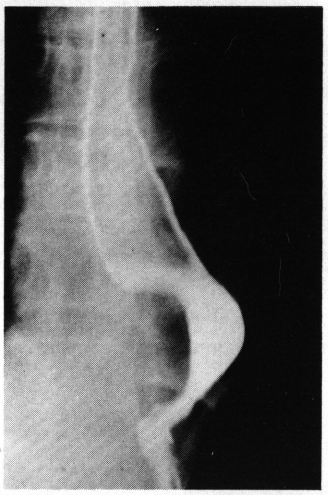

Fig. 1. Esophagogram, showing a filling defect of the esophagus.

Table 2. Congenital esophageal cyst

Case	Age	Sex	Sympoms	Chest X-Ray	Site	Preop. diagnosis
1	29	male	Discomfort in epigastrium	Normal	Lower third of esophagus	esophageal submucosal tumor
2	47	male	no		〃	mediastinal tumor
3	33	female	no		〃	esophageal submucosal tumor
4	16	female	no		middle third of esophagus	mediastinal tumor

Table 3. Congenital esophageal cyst

Case	Operation	Thoracotomy	Size of cyst (cm)	Histology	Complication	Outcome
1	excision	right	3×3	bronchogenic cyst	no	alive and well, 4 years 5 months
2	excision	right	5×4	duplication cyst	no	alive and well, 4 years
3	excision	left	6×3.5	duplication cyst	no	alive and well, 9 months
4	excision	right	5×3.5	duplication cyst	no	alive and well, 2 months

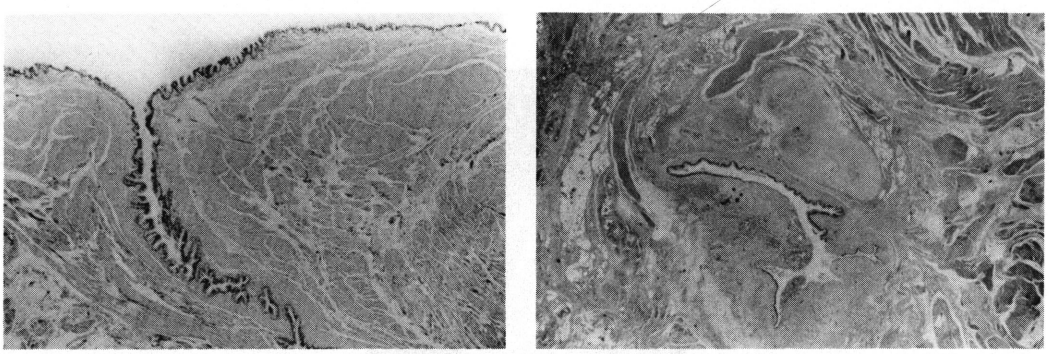

Fig. 2. Histologic findings, showing a ciliated columnar epithelia (left) and scattered cartilaginous components (right).

DISCUSSION

With recent expansion of chest x-p examination, the mediastinal disorders has become detected not infrequently. The esophageal cyst is also detected by chance as an abnormal shadow in the mediastinum.

It has become easy to diagnose precisely and treat for patients who having abnormal shadow on chest x-p as early as possible in accordance with the remarkable progress in and generalization of thoracic surgery.

Although the incidence of esophageal cyst is very low,[1)2)] the outcome of surgery is satisfactory as reported by HALLER.[3)] The categories of intrathoracic cysts were usually as follows[1)], 1) bronchogenic cyst related to the bronchial tree, showing a ciliated columnar epithelium, often having cartilage 2) Intramural esophageal cyst related to the esophageal wall, showing a ciliated columnar epithelium without cartilage, suggesting the result of defect in the embryonal misdevelopment of vacuolation process and 3) enteric cyst related to the intestinal wall, showing the characteristics of associated vertebral abnormalities which is known as splitnotochord syndrome and posterior mediastinal location separated from the esophagus. In this series, one corresponded with the 1st category and three were the 2nd. There is none of the 3rd category. In distinguishing esophageal cyst from bronchogenic one, histologic finding is the most important means even if lying in the esophageal wall. When component of the cyst would not be completely bronchogenic it should be considered the esophageal cyst. In our experienced patient, histologic compartment of the cystic wall contained the cartilaginous tissue in part and there was nothing to

show the elements of bronchogenic origin such as bronchial glands except for the scattering of the cartilaginous tissue.

Such is considered to be the esophageal cyst, being still in question with respect to the definition to distinguish from the bronchogenic cyst. Much has been said that most of esophageal cysts had no communication with the esophageal lumen.[3)4)] And so it is easy to remove the cyst without a resection of circumferential wall of the esophagus in most cases.

STETHI *et al*[5)] reported that 10% of the esophageal cysts communicated with the esophageal lumen. It should be borne in mind that the esophageal cysts communicating with the lumen must be differentiated from esophageal intramural pseudodiverticulosis[6)], esophagitis cystica and polycystic dystrophy.[8)]

Most are asymptomatic. Hewever, we should pay attention to the patient with massive hemorrhage[9)] and other symptoms due to compression of the adjacent organs such as dysphagia, cough, dyspnea, pneumonia and cardiac arrythmia. Surgical excision is indicative of those who have the symptoms related to compression of the adjacent organs. It is known that malignancy is very rare.[10)] However, the treatment for esophageal cysts is mandatory for acculate diagnosis and curative excision.

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