A Case Report of Esophageal Lipoma

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(Received Dec. 1. 1994)

Summary

A 68-year old female who noticed a sense of obstruction on swallowing consulted a nearby hospital. She was diagnosed as having an esophageal submucosal tumor through esophageal fluoroscopic and endoscopic examinations.

The patient was referred to our department because of aggravation of symptoms four years after the initial examination. Fluoroscopic and endoscopic examinations, together with endoscopic ultrasonography revealed a sessile smooth surface submucosal tumor with a longitudinal diameter of approximately 3 cm in the cervical esophagus.

Through a left cervical incision, the tumor was enucleated by applying longitudinal excision without leaving any impairment to the esophageal mucosa. The tumor was a soft consistent mass enclosed with a thin capsule and measuring 2.5×1.0×0.8 cm. The pathological finding showed a benign esophageal lipoma consisting of mature adipose tissue.

The necessity of early treatment must be stressed as, if left untreated, the tumor will grow to a pedunculated state and it may give rise to a serious fatal symptom such as suffocation caused by obstruction of the larynx in regurgitation of the pedunculated tumor.

Introduction

Benign tumors of the esophagus are relatively rare in comparison with malignant tumors but recently, reports of benign tumors are gradually increasing due to improved diagnostic procedures.

The majority of benign tumors of the esophagus are leiomyoma and lipoma are extremely rare\(^3\). However, the necessity of early treatment is pointed out as, the tumor will grow into a pedunculated tumor if left untreated and it may give rise to a serious fatal symptom such as suffocation caused by obstruction of the larynx in regurgitation of the pedunculated tumor\(^2\)\(^\sim\)\(^3\).
An extremely rare case of esophageal lipoma located in the cervical esophagus which was enucleated through a left cervical incision will be reported along with a review of relevant literature.

**Case report**

A 68-year old female who became aware of a sense of obstruction on swallowing consulted a nearby hospital in 1987. She was diagnosed as having an esophageal submucosal tumor through esophageal fluoroscopic and endoscopic examinations. In October 1991, the patient was referred to our department because of increase in symptoms.

On admission, the patient was 136.5 cm in height and 49 kg in weight, well nourished and with absence of superficial enlargement of lymph nodes.

As for laboratory examinations on admission, the hematological study showed slight anemia with a hemoglobin value of 11.6 g/dl, and a hematocrit value of 34.2%. Blood chemical analysis such as electrolyte, liver and kidney functions and urinalysis were all within normal limits. Chest X-ray films showed no abnormal findings and an electrocardiogram showed myocardial damage. Respiratory function studies were almost within normal limits. Esophageal roentgenogram using barium revealed a round mass region with smooth surface, measuring 3.0 x 1.8 cm in the cervical esophagus (Fig. 1). Endoscopic study revealed a round protruding lesion 16 to 18 cm from the upper incisor (Fig. 2: Top). An iodine staining study revealed an irregular unstained area at the top of tumor and punch biopsy was performed in this area (Fig. 2: Bottom). A pathological examination...
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Fig. 3 Endoscopic ultrasonography showed a double hump-shaped tumor.

Fig. 4 The CT scan revealed a protruding lesion (Arrow).

A pathological study showed a benign esophageal lipoma consisting of mature adipose tissue without atypical findings (Fig. 6).

Although a left recurrent nerve palsy was noted after operation, this was remissioned and the patient was discharged 24 days postoperatively.

Discussion

In the Mayo Clinic, 164 cases of gastrointestinal lipoma are recorded for the 27-year period of 1935 through 1961. This number represents only 4 percent of about 4000 cases of
benign neoplasm of the digestive tract treated surgically during this period. An accumulation study by Anderson et al. revealed that the esophageal lipoma amounted to only 5 cases of the 246 benign esophageal tumors. Moersch et al. reported that benign esophageal tumors were 44 cases of 7459 necropsies, and of these 32 (72.7%) were leiomyoma but lipoma was not recorded.

In Japan, at the 25th Annual Meeting of the Japanese Society for Esophageal Disease in 1978, Suzuki & Nagayo reported that the resected cases of benign esophageal tumors were only 149 cases in comparison with 11932 resected cases of malignant tumors for the same period, amounting to only 1.2%. Furthermore, 132 cases (88.6%) of 149 benign esophageal tumor were leiomyoma and only one case of lipoma (2.0%). An accumulation study by Nabeya et al. in 1991, lipoma amount to 15 cases (2.0%) of 759 benign esophageal tumors. Ishihara also reported the incidence of lipomas in the digestive tract to be 4.8 percent, with that of esophageal lipoma being 0 percent in 615 necropsy cases.

According to the accumulation study by Kuroda, only 21 cases of esophageal lipoma have been reported up to 1993 in Japan. The male/female ratio was 12/9 (1.33) and age distribution was 30 to 78 year-old (mean 58.8). Location of tumor was most frequent in cervical esophagus. 11 of 20 cases which were stated as the location existed in cervical esophagus.

Diagnosis for submucosal tumor is possible by endoscopic examination and endoscopic ultrasonography, but it would be difficult to diagnose a lipoma preoperatively. Pantoja et al. described that the lipoma show an attenuation coefficient of -30 to -100 Hounsfield unit (HU) on CT, and Gandini et al. described that the diagnosis of esophageal lipoma would be possible by CT value. In Japan, Uchiyama et al. reported the esophageal lipoma which was diagnosed preoperatively by CT value. In our case, it was impossible to measure the CT value as the tumor was small in size.

In regard to treatment of esophageal lipoma, for the tumor located in the cervical esophagus resection was performed through a cervical esophageal incision, and for the tumor located in the thoracic esophagus resection was performed through a thoracotomy, and endoscopic polypectomy was reported for small tumors.

Hosokawa et al. observed a tumor growth rate on UGI series and reported that the volume of the tumor had increased 2.5 times over a period of 3 years and 9 months. A lipoma located on the upper esophagus will grow into a pedunculated tumor and possibility of regurgitation of tumor into the mouth was considered, and this may give rise to serious fatal symptoms such as suffocation by obstruction of the larynx in regurgitation of the tumor. Tasaka et al. reported a case in which during the course of withdrawing the fiberscope, the tumor was regurgitated and protruded from mouth, causing suffocation and cardiac arrest. Cochet et al. reported a case which had died from suffocation caused by obstruction of the larynx in regurgitation of the pedunculated tumor. Allen et al. reported an autopsy case which was identified as sudden death due to suffocation caused by obstruction of the larynx in regurgitation of pedunculated lipoma. For these reasons, the necessity of early treatment of the esophageal lipoma was pointed out.

**Conclusion**

We reported a 68-year old female with esophageal lipoma in the cervical esophagus. Although esophageal lipoma is extremely rare
benign tumor, early treatment is necessary as, the tumor will grow to a pedunculated state and it may give rise to a serious fatal symptom such as suffocation caused by obstruction of the larynx in regurgitation of the pedunculated tumor.

References


