# First report of a mucosa-associated lymphoid tissue (MALT) lymphoma of the esophagus diagnosed by endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA)

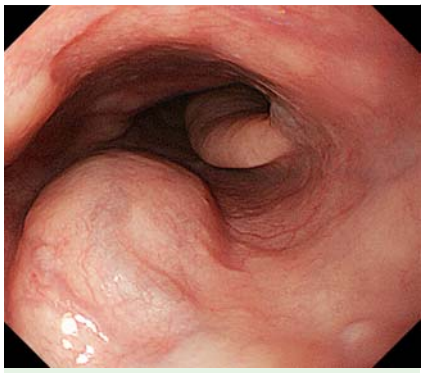

**Fig. 1** Endoscopic findings in a 60-year-old woman with dysphagia: a large, rounded mass with normal overlying mucosa is seen extending longitudinally along the entire esophagus.

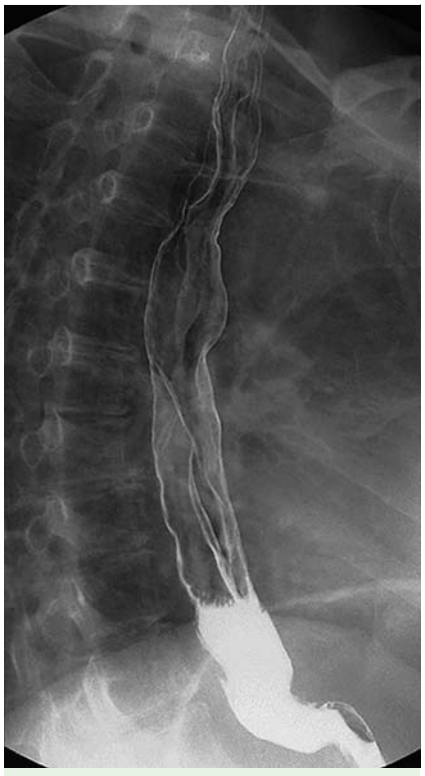

**Fig. 2** Esophagogram showing a large submucosal tumor with luminal narrowing of the whole of the esophagus.

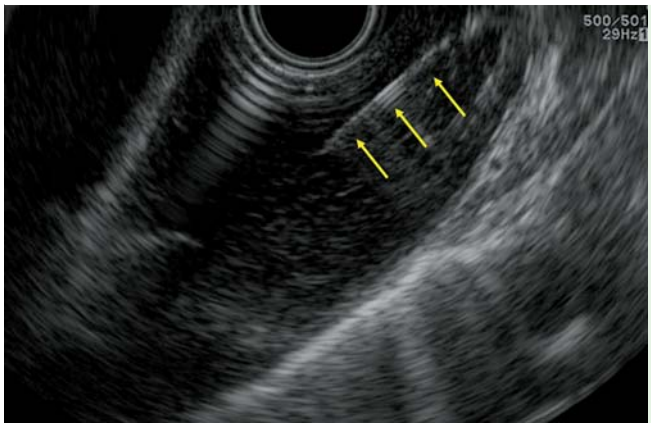

**Fig. 3** Endoscopic ultrasound showing a hypoechoic thickening in the third layer. Endoscopic ultrasound-guided fine-needle aspiration was carried out using a 22-G needle (arrows).

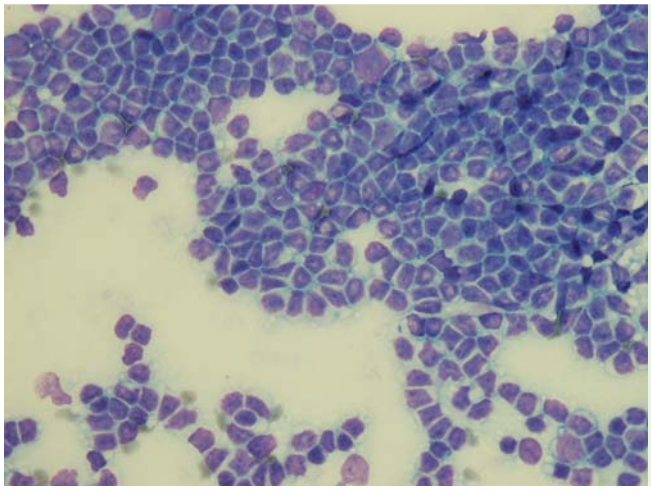

**Fig. 4** Small- to medium-sized lymphocytic cells with mildly irregular nuclei.

Mucosa-associated lymphoid tissue (MALT) lymphoma of the esophagus is a rare tumor [1–3] with varying presentations [4]. Only a few reports have described MALT lymphoma of the esophagus spanning the entire circumference and length of the esophagus [3]. Many of these cases were diagnosed surgically. Endoscopic ultrasound-guided fine-needle aspiration (EUS-FNA) is an established method of obtaining submucosal tissue specimens [5]. We report here the first case of MALT lymphoma of the esophagus diagnosed by EUS-FNA.

A 60-year-old woman attended our institution due to dysphagia. Upper gastrointestinal endoscopy revealed a smooth surface with visible capillaries over the entire circumference of the esophagus and a white, soft, elastic submucosal tumor covered by normal mucosa (▶ **Fig. 1**). An esophagogram showed a slightly elevated submucosal tumor extending over the entire esophageal length (▶ **Fig. 2**), and enhanced computed tomography demonstrated thickening of the left bronchial and esophageal walls along with swelling of the pharyngeal lymph nodes. Endoscopic ultrasonography revealed a tumorous lesion presenting as a primarily hypoechoic mass arising in the third layer, with a hyperechoic region.

Because a diagnosis was not reached using specimens obtained with biopsy forceps, EUS-FNA was performed (▶ **Fig. 3**). The presence of small- to medium-sized lymphocytic cells with mildly irregular nuclei, along with CD5(–), CD10(–), CD19(+), CD20(+), CD22 (+), and λ monoclonality on flow cytometry, led to a diagnosis of MALT lymphoma of the esophagus (▶ **Fig. 4**). We described the tumor as a

malignant, extramarginal zone B-cell lymphoma of the MALT type, clinical stage IV (Lugano International Conference classification). The patient was treated with a total of six courses of chemotherapy with rituximab, cyclophosphamide, vincristine, doxorubicin, and prednisolone (R-CHOP), and a complete response was achieved.

To the best of our knowledge, this is the first report of EUS-FNA diagnosis of MALT lymphoma of the esophagus.

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**Competing interests:** None

**T. Ogura[1,2], M. Tajika[3], S. Hijioka[1], K. Hara[1], S. Haba[1], W. Hosoda[4], Y. Yatabe[4], S. Asano[5], K. Higuchi[2], K. Yamao[1], Y. Niwa[3]**

[1] Department of Gastroenterology, Aichi Cancer Center Hospital, Nagoya, Japan
[2] 2nd Department of Internal Medicine, Osaka Medical College, Osaka, Japan
[3] Department of Endoscopy, Aichi Cancer Center Hospital, Nagoya, Japan
[4] Department of Pathology and Molecular Diagnostics, Aichi Cancer Center Hospital, Nagoya, Japan
[5] Department of Respiratory Medicine, Handa Municipal Hospital, Nagoya, Japan

## References

1 *Lewin KL*, *Ranchod M*, *Dorfman RF* et al. Lymphomas of the gastrointestinal tract: a study of 117 cases presenting with gastrointestinal disease. Cancer 1978; 42: 693 – 707
2 *Brady LW*, *Asbell SO*. Malignant lymphoma of the gastrointestinal tract. Erskine Memorial Lecture, 1979. Radiology 1980; 137: 291 – 298
3 *Kishi K*, *Maedu H*, *Nakamura Y* et al. Radiotherapy for mucosa-associated lymphoid tissue (MALT) lymphoma of the esophagus: a case report with a diagnostic and therapeutic discussion. Int J Clin Oncol 2011: Jun 10 (Epub ahead of print)
4 *Carnovale RL*, *Goldstein HM*, *Zornoza J* et al. Radiologic manifestations of esophageal lymphoma. AJR Am J Roentgenol 1977; 128: 751 – 754
5 *Yamao K*, *Sawaki A*, *Mizuno N* et al. Endoscopic ultrasound-guided fine-needle aspiration biopsy (EUS-FNAB): Past, present, and future. J Gastroenterol 2005; 40: 1013 – 1023

## Bibliography

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## Corresponding author

***M. Tajika***
1-1 Kanokoden
Chikusa-ku
Nagoya 464-8681
Japan
Fax: +81-527635233
mtajika@aichi-cc.jp