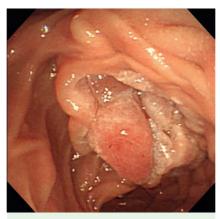
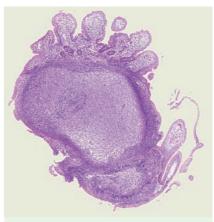
# Follicular lymphoma of the duodenum



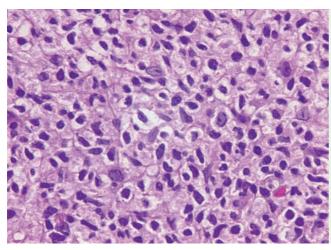
**Fig. 1** The elevated lesion, which looks like a flower petal, at the second portion of the duodenum.



**Fig. 2** A whitish and elevated lesion surrounds the major duodenal papilla.



**Fig. 3** A neoplastic follicle is present in the lamina propria of the duodenum.



**Fig. 4** The majority of lymphoma cells are cleaved cells of small-to-medium size.

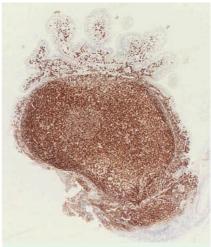
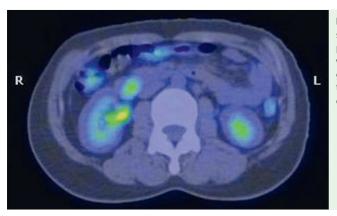


Fig. 5 Lymphoma cells are positive for Bcl-2.



**Fig. 6** Positron emission tomography-computed tomography with 18F-fluorodeoxy-glucose shows radioactive uptake in the duodenal region.

The gastrointestinal tract is the most common site for the presentation of extranodal non-Hodgkin's lymphoma. Depending on the series, follicular lymphoma of the gastrointestinal tract accounts for 3.6% of gastrointestinal lymphoma

[1]. Above all, follicular lymphoma shows a predilection for the duodenum, where 55.6%–62.5% of cases are located [1,2]. We present the case of a 47-year-old woman with epigastralgia. An elevated lesion like a flower petal was found at

the second portion of the duodenum on panendoscopy (**Fig. 1**). Duodenoscopy showed a whitish lesion surrounding the major duodenal papilla (**Fig. 2**). Although the follicular lymphoma of the small intestine showed multiple whitish lymphomatous polyps [1,3], ampullary carcinoma could be included in the differential diagnosis.

Histopathologic evaluation from biopsy specimens revealed a proliferation of atypical lymphoid cells forming follicle-like structures in the lamina propria of the duodenum (**○ Figs. 3** and **4**). On immunohistochemical study, the atypical lymphoid cells were diffusely positive for CD20, CD10, and Bcl-2 (**○ Fig. 5**), but negative for cytoplasmic CD3ε.

The efficacy of positron emission tomography (PET) to measure the staging of patients with follicular lymphoma is controversial because it has been hypothesized that 18F-fluorodeoxyglucose uptake reflects the proliferative activity of lymphoma cells, and therefore is more pronounced in more aggressive types of lymphoma [4]. However, PET-computed tomography in our case showed radio uptake in only the duodenal region (**• Fig. 6**). Other sites showed no malignancies.

This disease is usually characterized by a typically indolent clinical course [3,5]. Estimates of 5-year disease-free survival and 5-year relapse-free survival are 62% and 54%, respectively [2]. The therapeutic strategies for follicular lymphoma have been transformed by monoclonal antibodies, used alone or in combination with chemotherapy. Our patient was treated with one cycle of RCHOP chemotherapy, and is alive with no recurrence 2 years after treatment.

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#### References

- 1 Yoshino T, Miyake K, Ichimura K et al. Increased incidence of follicular lymphoma in the duodenum. Am J Surg Pathol 2000; 24: 688–693
- 2 Shia J, Teruya-Feldstein J, Pan D et al. Primary follicular lymphoma of the gastrointestinal tract: a clinical and pathologic study of 26 cases. Am J Surg Pathol 2002; 26: 216 224

- 3 Damaj G, Verkarre V, Delmer A et al. Primary follicular lymphoma of the gastrointestinal tract: a study of 25 cases and a literature review. Ann Oncol 2003; 14: 623 629
- 4 Wöhrer S, Jaeger U, Kletter K et al. 18F-fluoro-deoxy-glucose positron emission to-mography (18F-FDG-PET) visualizes follicular lymphoma irrespective of grading. Ann Oncol 2006; 17: 780–784
- 5 Salles GA. Clinical features, prognosis and treatment of follicular lymphoma. Hematology 2007; 1: 216-225

#### **Bibliography**

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