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Parietal Cell (Oncocytic) Adenocarcinoma of the Stomach in a Female Patient: Superficial Spreading and Extensive Nodal Involvement

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A case of parietal cell (oncocytic) adenocarcinoma in a 62-year-old woman is reported. This rare entity has 26 reported cases to date and is usually related to male gender and localized disease with favorable prognosis. In the present case, the unusual finding of parietal cell

(oncocytic) adenocarcinoma and extensive nodal metastasis in a woman is reported.

Keywords: parietal cells; gastric; stomach; adenocarcinoma; oxyphil cells

We report a case of parietal cell (oncocytic) adenocarcinoma in a 62-year-old woman. Her past history was unremarkable and she had no previous diagnosis of neoplasia. The gastrectomy specimen exhibited a 2-cm polypoid mass in the lesser curvature of gastric body with cut surface of white, bright, and homogenous appearance. The histology revealed a predominantly submucosal solid mass with frequent areas of tubular differentiation (Figure 1). Epithelial tumor cells presented a uniform pattern of large eosinophilic cytoplasm and nuclei with moderate pleomorphism (Figures 2 and 3). The mucosal surface was intact and few tumoral areas were seen in mucosal lamina propria (Figure 4). Muscular and serous layer were not involved. Nodal metastasis were detected in 4/6 lymph nodes of the lesser and in 2/5 lymph nodes of the greater curvature (Figures 5 and 6). Immunohistochemistry

Figure 1. Submucosal oncocytic tumor (hematoxylin and eosin, 10X).

revealed diffuse and strong immunostaining by antimitochondrial antibody (Figure 7). The patient was followed up for 2 years with no sign of disease recurrence.

Parietal cell adenocarcinoma is a rare entity with 26 reported cases to date.¹ This histologic variant has been associated with better prognosis.² The tumor may grow as an intramucosal or a submucosal mass.^{1,3} In a recent study, the largest series available

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Figure 2. Oncocytic and tubular differentiation (hematoxylin and eosin, 40×).

Figure 3. Oncocytic and tubular differentiation (hematoxylin and eosin, 40×).

of 10 Japanese cases reported nodal metastasis in only 2 of 8, and extension to subserosa layer also in 3 of 8 cases. There was a striking male predominance (9:1) and the mean age was 70.5 ± 7.9 years,¹ which is in agreement with previous data.³ Immunohistochemistry revealed positive staining for human gastric mucin and mitochondria and absence of H^+-K^+ -ATPase expression.¹ The authors thus suggested the use of oncocytic carcinoma nomenclature rather than parietal cell carcinoma since H^+-K^+ -ATPase is considered a marker parietal gastric cell differentiation. On the other hand, others have detected positive staining of the proton pump in tumor cells.⁴

Figure 4. Oncocytic tumor in mucosal layer (hematoxylin and eosin, 10×).

Figure 5. Perigastric nodal metastasis (hematoxylin and eosin, 10×).

The present case confirms typical features of parietal cell (oncocytic) adenocarcinoma described by others, such as extensive submucosal spreading while the occurrence in a female patient and the extensive nodal involvement are unusual findings of this report.

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Figure 6. Perigastric nodal metastasis (hematoxylin and eosin, 40×).

Figure 7. Strong immunostaining by antimitochondrial antibody (100×).

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