



Russel body gastritis associated with gastric adenocarcinoma: A rare case report

Mide adenokarsinomu ile ilişkili Russel body gastriti : Nadir bir olgu sunumu

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Abstract

Russel body gastritis is a rare entity, the exact etiology of which is unknown. Approximately 50 cases have been reported in the literature so far. In the literature, especially *Helicobacter pylori* infection, HIV, and multiple myeloma have been associated with diseases, such as gastric adenocarcinoma and with alcohol use. Russel body gastritis has rarely been reported to be associated with gastric adenocarcinoma. We will present the determination of Russell body gastritis in the control biopsy of a 60-year-old female patient diagnosed with stomach adenocarcinoma six months ago. This case report presents this rare condition and etiology in light of the literature review.

Key words: Russel body, gastritis, gastric adenocarcinoma

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Öz

Russel Body Gastriti (RBG), etiyolojisi kesin olarak bilinmeyen nadir görülen bir gastrit çeşididir. Literatürde günümüze kadar yaklaşık 50 vaka bildirilmiş olup *Helicobacter pylori* enfeksiyonu, HIV, multipl miyelom, gastrik adenokarsinom gibi hastalıklar ve alkol kullanımı ile ilişkili olabileceği bildirilmiştir. Russell body gastriti 'nin nadiren gastrik adenokarsinom ile ilişkili olduğu bildirilmiştir. Biz altı ay önce mide parsiyel rezeksiyonu sonrası mide adenokarsinomu tanısı alan 60 yaşında kadın hastanın; mide kontrol endoskopik biyopsisinde Russell body gastriti tanısını sunacağız. Bu olgu sunumu nadir görülen bu durumu ve etyolojiyi literatür eşliğinde sunmayı amaçlamıştır.

Anahtar kelimeler: Russel Body, Gastrit, Adenokarsinom

Introduction

Russel Body Gastritis (RBG) is a rare entity with an unknown etiology. About 50 cases have been reported in the literature so far [1]. In the literature, especially *Helicobacter pylori* infection, HIV and multiple myeloma have been associated with diseases, such as gastric adenocarcinoma and with alcohol use [1-5]. This study aimed to present this rare etiology and condition with a literature review.

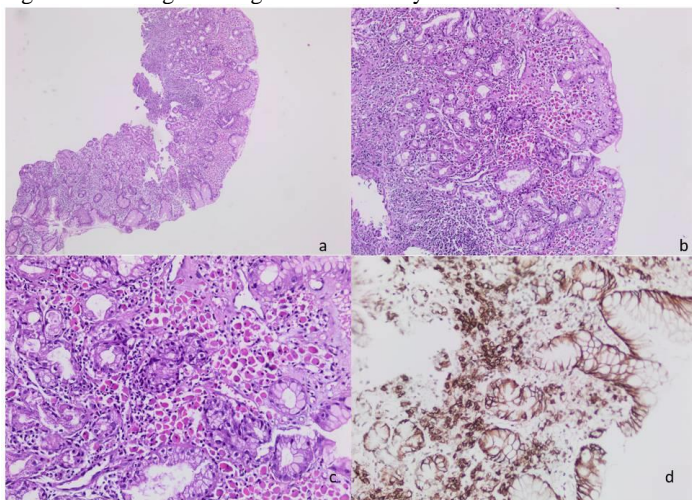
Case report

In our case, a 60-year-old female patient underwent subtotal gastrectomy for gastric adenocarcinoma five months ago. She was diagnosed with grade-2 adenocarcinoma, and no metastasis was detected in the lymph nodes. After six months of adjuvant chemo-radiotherapy, control endoscopy showed a clean anastomosis line, and a biopsy was taken from the ulcerated area proximal to the anastomosis line. Histopathological examination of the specimens revealed moderate gastritis in Giemsa staining and plasma cell deposition with many cytoplasmic Russell Bodies widespread in the lamina propria and chronic gastritis findings (Figure 1 a, b, c). Immunohistochemical staining applied to the large cytoplasm plasmacytoid cells showed positive expressions of CD 138, CD 79A, and kappa lambda (Figure 1d). In the serological analysis of our patient, HIV and Hepatitis C were negative, and Hepatitis B antigen was positive.

We eliminated the granular cell tumor with the S100 negativity and lymphoplasmacytic lymphomas by polyclonal staining of kappa lambda.

The patient's consent was obtained for this case study.

Figure 1: Pathological images of russel body.



a) Russel Body Gastritis H&E images 40X b) Russel Body Gastritis H&E images 100X c) Russel Body Gastritis H&E images 400X d) Plasma cells in the gastric mucosa CD 138 stain 200X

Discussion

RBG is a type of chronic gastritis characterized by the accumulation of plasma cells containing eosinophilic cytoplasmic inclusion, which is located in gastric lamina propria. In 1998, Tazawa and Tsutsumi described intense RB-containing plasma cell infiltration in the gastric mucosa as RBG [6].

Russell bodies are the accumulation of condensed immunoglobulins in the perinuclear cistern of the flat endoplasmic reticulum and caused by intense stimulation of plasma cells. Plasma cells consisting of a large number of Russell bodies in the cytoplasm are called Mott cells. They may be localized in the gastrointestinal tract, usually in the antrum [1].

Tazawa has associated RBG with chronic inflammation, and it has been associated with *Helicobacter pylori* infection in later cases: four cases with adenocarcinoma, three cases with multiple myeloma, three cases with HIV infection, and 1 case with alcohol use [1-4, 6].

In a study conducted by Johansen et al., when the ratio of Russell body in peritumoral mucosa in tumor-free endoscopic biopsy materials in adenocarcinomas was compared, Russell body was significantly higher in peritumoral tissue compared to others [7].

In the literature, four cases associated with the tumor have been reported as in our case [1-3, 6]. However, when the cases in the literature were examined, other lesions were detected simultaneously with the tumor and in our case, the lesion was found after tumor treatment. In our case, the cause of plasmacyte stimulation can also be interpreted in response to the immunosuppressive effect of *Helicobacter Pylori* infection or chemotherapy treatment because the Mott cells were not observed when the gastric tissue sections of the tumor were examined during the initial diagnosis of our patient.

When diagnosing Russell body gastritis, several diagnoses need to be distinguished. Cytokeratin negation excludes carcinoma, while kappa and lambda polyclonal immunoreactive patterns exclude lymphoplasmacytic lymphoma and plasmacytoma. Cytological atypia can be distinguished from mucosa-associated lymphoid tissue (MALT) lymphoma by lymphoepithelial lesions, absence of centrocyte-like cells and monocytoid cells, and excessive plasmacytic differentiation [8]. Finally, there is no criterion for the prevalence of Russell body to define Russell body gastritis [1]. However, our personal view is that the Russell bodies should be aborted in the gastric mucosa.

Russell Body Gastritis is a rare entity that can be encountered, especially in endoscopic biopsy materials. Although it is usually associated with *Helicobacter Pylori*, it can be associated with various diseases. As in our case, it should be kept in mind that biopsy materials may be encountered in control adenocarcinoma cases.

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