

Case Report

Incidentally Detected Plasmacytoma of the Stomach- A Rare Entity

Dr. Kandukuri Mahesh Kumar*, Dr. Ch. Krishna Reddy, Dr. Sudhir Kumar Vujhini

Malla Reddy Institute of Medical Sciences, Suraram Main Road, GHMC Quthbullapur, Jeedimetla, Hyderabad, India

***Corresponding author**

Dr. Kandukuri Mahesh Kumar

Email: doctormaheshgoud@gmail.com

Abstract: Extramedullary plasmacytomas are rare among plasma cell neoplasms and primary gastrointestinal plasmacytomas are even rarer and many of the cases are not detected until the disease advances. We reported a case of extramedullary plasmacytoma of stomach in a 46 yr old female who presented with complaints of dyspepsia and melaena. Upper gastrointestinal endoscopy revealed a nodule in the pylorus region and provisional diagnosis of adenocarcinoma was given. On histopathological examination the lesion showed features of plasmacytoma. Whole body examination was done to rule out multiple myeloma. As the chances of progressing to multiple myeloma are more, patient was kept on follow up.

Keywords: Dyspepsia, Endoscopy, Multiple myeloma, Plasmacytoma

INTRODUCTION

Plasmacytomas are generally divided into two broad groups based on location: plasmacytoma of bone and extramedullary or soft tissue plasmacytoma. Solitary plasmacytomas are more frequent in males than females and have a peak incidence in the sixth decade. Primary extramedullary plasmacytomas account for approximately 3-5% of all plasma cell neoplasms [1]. They have been described in any soft tissue, most frequently in the upper respiratory tract, and are defined by lack of evidence of bone marrow involvement [2]. Gastric plasmacytoma is rare and constitutes in turn less than 5% of these tumors.²

CASE REPORT

A 46 year old female presented to the outpatient department with complaints of dark colored stools (Melaena), dyspepsia since 2 months. Patient recently had two episodes of hematemesis with approximately 10-15 ml of fresh blood vomited along with the food particles. Patient is a known case of gastric ulcer and regularly taking her medications; she is on regular follow up with the gastroenterologist and periodically undergoes Upper Gastro Intestinal (GI) Endoscopy as a part of follow-up. Patient is also a known case of Type 2 diabetes mellitus and dilated cardiomyopathy. Patient was advised to undergo routine blood investigations and Upper GI endoscopy. Blood glucose levels elevated, Hemoglobin 9.2 gm/dl, total leukocyte and differential leukocyte counts were normal. Upper GI endoscopy shows a small nodular lesion of approximately 0.8 cm in diameter located at the pylorus end of the stomach. A provisional diagnosis

of gastric adenocarcinoma was made and punch biopsy was taken and the tissue was sent for histopathological examination for definite opinion.

GROSS:

We received a tiny grey brown soft tissue bit measuring 0.5 cm X 0.3 cm. Cut section shows homogenous grey white appearance. Tissue was processed and slides were stained with Hematoxylin and Eosin for the Histopathological examination.

MICROSCOPY:

Sections shows gastric epithelium with goblet cell hyperplasia, sub mucosa showing tumor tissue arranged in sheets with individual cells are small to large with abundant eosinophilic cytoplasm, high nuclear cytoplasmic ratio, hyper chromatic nucleus which is peripherally placed (**Figure 1, 2 & 3**). Some of the cells are bizarre and showing abundant eosinophilic inclusions- Russell's bodies (**Figure 4**). Tumor tissue shows invasion up to submucosa without involvement of muscularis propria. Based on these features diagnosis of plasmacytoma was made.

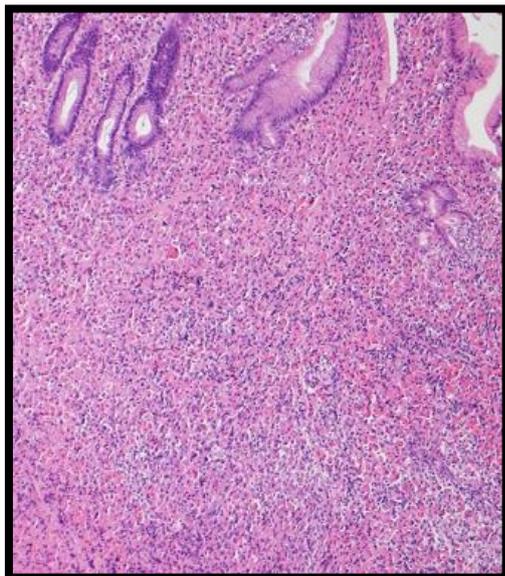


Fig-1: Photomicrograph shows hyperplastic gastric epithelium with submucosal tumor tissue (Low Power views)

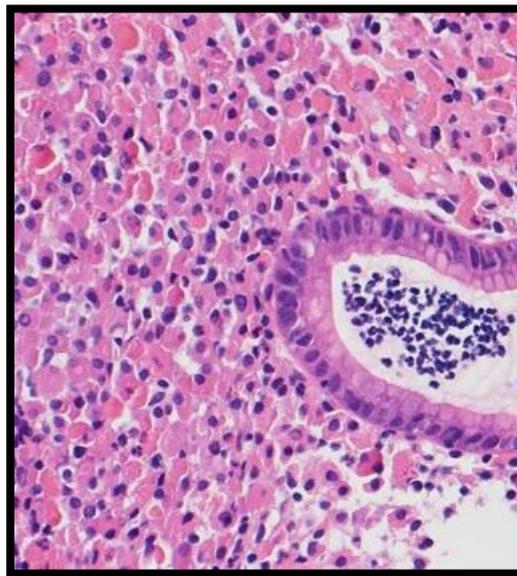


Fig-3: Photomicrograph shows hyperplastic gastric epithelium with submucosal tumor tissue (High power views)

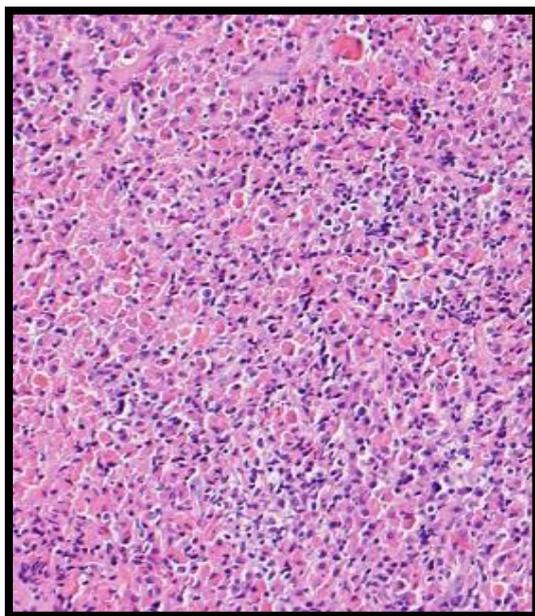


Fig-2: Photomicrograph shows tumor tissue arranged in sheets (Low Power).

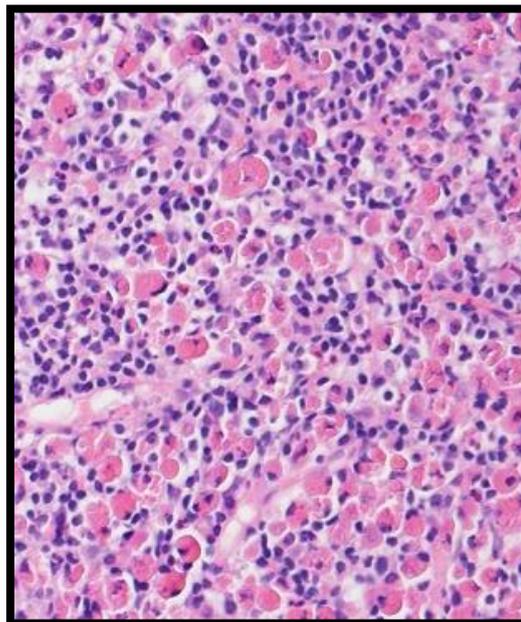


Fig-4: Individual tumor cells are Large with high nuclear cytoplasmic ratio, eccentric hyperchromatic nuclei and intracytoplasmic eosinophilic inclusions – Russell's Bodies (High Power).

DISCUSSION

Primary extramedullary plasmacytomas (EMP) account for approximately 3-5% of all plasma cell neoplasms [3] they are most commonly found in the oral cavity and upper respiratory tract [4]. Gastrointestinal tract (GI) is involved in only approximately 7% of cases. All segments of the GI tract may be involved, and the small bowel is the most common site of occurrence, followed by the stomach, colon, and esophagus [5]. In our case plasmacytoma was located in

stomach but other rare cases of pancreas [3], colon [4-5] and mesentery [8] were also reported. Males are commonly affected but our case was reported in female. Solitary EMPs in the GI tract are rare and can easily be mistaken for adenocarcinoma on endoscopy [5]. In our case endoscopy revealed a nodular lesion in the pylorus region which was expected to be adenocarcinoma but on histopathological examination it turned out to be plasmacytoma. Most patients of gastric plasmacytomas are elderly with nonspecific symptoms, including anorexia, weight loss, epigastric discomfort, or gastrointestinal bleeding. Our case presented with complaints of dyspepsia and bleeding. A causative association between *Helicobacter pylori* infection and gastric tumors, specifically adenocarcinoma and MALT lymphoma has been established [2,6]. Our patient was suffering from chronic gastric ulcer which correlated with the association of both conditions. The postulated cell of origin of plasmacytoma is the marginal zone B cell, which corresponds to a post germinal center B cell with rearranged and mutated immunoglobulin heavy and light chain genes [2,7].

Gastric plasmacytomas are to be differentiated from other lesions like plasma cell granuloma, lymphoplasmacytic lymphoma and multiple myeloma. Diagnostic criteria for EMP include a tissue biopsy showing monoclonal plasma cell activity, absence of evidence of multiple myeloma, a low or absent M-protein concentration and absence of hypercalcemia or renal failure [8]. Other investigations like complete blood picture, renal function tests, serum electrophoresis, bone marrow biopsy, radiological skeletal survey, were inconclusive which ruled out multiple myeloma in our case. The prognosis after local treatment, either surgical or by radiation, is favourable [8]. Currently, surgical resection alone or with Radiotherapy (RT) in cases of inadequate surgical margins is the only treatment for solitary EMP in the GI tract [5]. The course of EMP is favorable with a 70% disease free survival at 10 years. The rate of progression of EMP to multiple myeloma ranges from 11% to 30%, at 10 years; hence long term follow up is required.

CONCLUSION

Primary gastric plasmacytomas are rare group of EMP. Endoscopy may give a misleading diagnosis of adenocarcinoma hence histopathological examination of tissue is required to give a definitive and confirmed

diagnosis. Other investigations are to be done during the follow-up visits to rule out multiple myeloma. EMP generally have good prognosis but chances of progression to myeloma are more hence long term follow up is mandatory for good clinical outcome. Our patient is on regular follow-up with the general physician and gastroenterologist but till now no signs or symptoms of disease progression were noted since 2 years.

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