Complete resolution of gastric amyloidosis after autologous stem cell transplantation

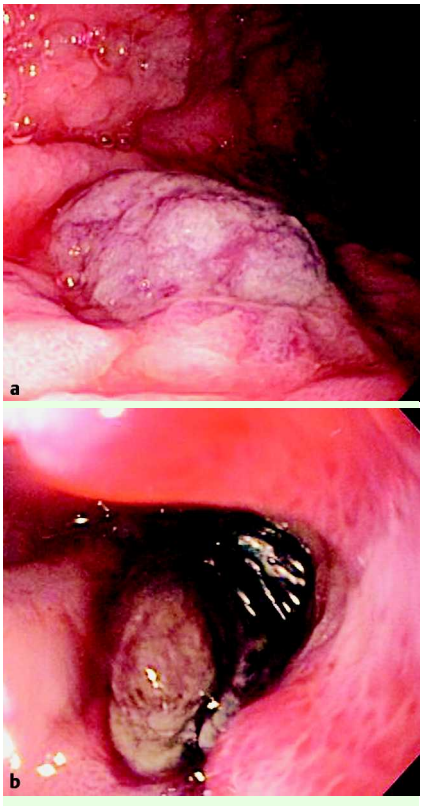

Fig. 1 Esophagogastroduodenoscopy findings. **a** A large pigmented lesion in the body of the stomach. **b** Giant ulcer in the cardia containing a large, necrotic, bleeding pigmented lesion.

A 48-year-old woman with multiple myeloma and amyloidosis presented with massive upper gastrointestinal bleeding 1 week after autologous stem cell transplantation (autologous-SCT). Esophagogastroduodenoscopy (EGD) demonstrated necrotic, purple, pigmented, friable lesions throughout the stomach (**Fig. 1a**), along with a bleeding ulcer in the cardia containing a central pigmented lesion (**Fig. 1b**; **Video 1**) which was successfully treated with epinephrine (1:10000) injections. Biopsies demonstrated nodular amyloid deposition (**Fig. 2**) which was Congo-red-positive. The patient had no further hematemesis and was discharged home 4 days later. Ten months after autologous-SCT, EGD revealed a normal stomach (**Fig. 3**; **Video 2**) with no histologic evidence of amyloid.

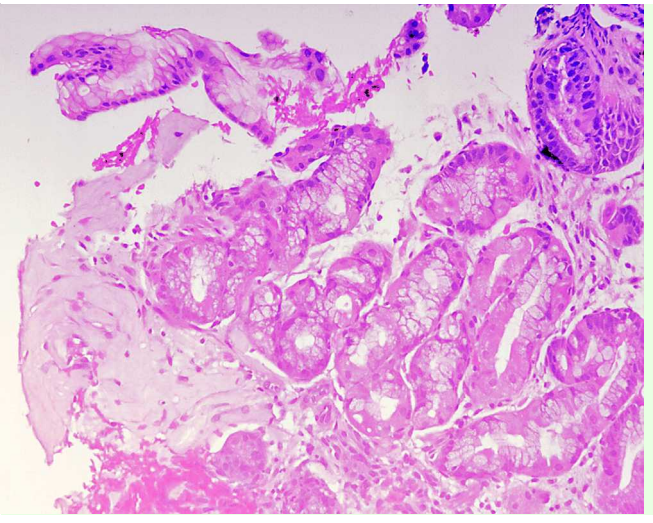

Fig. 2 Gastric biopsy with dense amyloid deposition in the mucosa at high magnification.

AL amyloid of the gastrointestinal tract involves the stomach in 8% of cases [1]. Only 1% of patients with gastric amyloidosis manifest symptoms such as bleeding [1,2], which has been attributed to light-chain deposition in blood vessels causing increased friability and eventual bowel infarction [2,3]. Characteristic endoscopic findings include thickened folds, mucosal erosions, submucosal hematomas, ulcerations, and mucosal friability [2]. Histology demonstrates deposition of amorphous hyaline material on H&E stain which is Congo-red-stain-positive. Treatment of AL amyloid is aimed at the underlying plasma cell disorder in order to decrease light-chain production. High-dose melphalan followed by autologous-SCT induces a complete hematologic response in the majority of patients in about 3 months [4,5]. This therapy may be associated with significant toxicity, especially in patients with underlying cardiac disease.

Video 1

Large ulcer in the cardia containing a bleeding pigmented lesion. Numerous additional lesions are present throughout the stomach which, upon probing, are friable and necrotic.

Video 2

Complete resolution of gastric amyloid 10 months after autologous stem cell transplantation.

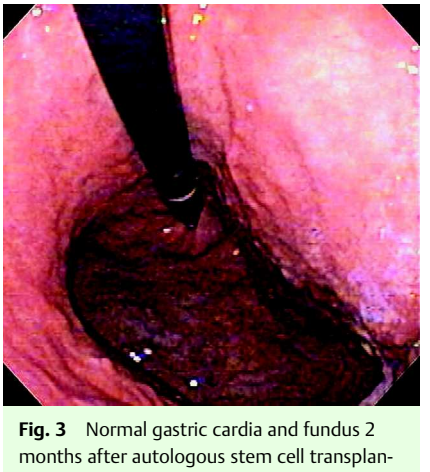

Fig. 3 Normal gastric cardia and fundus 2 months after autologous stem cell transplantation.

There are very limited published data documenting reversal of symptomatic gastrointestinal amyloid with multiple myeloma therapy [4,5]. We believe this is the first reported case of complete endoscopic and histologic resolution of gastrointestinal amyloid, particularly gastrointestinal amyloid causing bleeding, following autologous-SCT. In carefully selected patients with multiple myeloma, high-dose melphalan followed by autologous-SCT may be effective for symptomatic AL amyloid of the gastrointestinal tract.

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References

1 *Ebert EC, Nagar M.* Gastrointestinal manifestations of amyloidosis. Am J Gastroenterol 2007; 102: 1 – 12
2 *Chang HS, Myung SJ, Yang SK et al.* Massive small bowel bleeding in a patient with amyloidosis. Gastrointest Endosc 2004; 59: 126 – 129
3 *Gilat T, Spiro HM.* Amyloidosis and the gut. Dig Dis Sci 1968; 13: 619 – 633
4 *Comenzo RL, Vosburgh E, Falk RH et al.* Dose-intensive melphalan with blood stem-cell support for the treatment of AL (amyloid light-chain) amyloidosis: survival and responses in 25 patients. Blood 1998; 91: 3662 – 3670
5 *Sanchorawala V, Wright DG, Seldin DC et al.* An overview of the use of high-dose melphalan with autologous stem cell transplantation for the treatment of AL amyloidosis. Bone Marrow Transplant 2001; 28: 637 – 642

Bibliography
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