

Successful endoscopic haemostasis of an acutely bleeding duodenal lymphoma: a case report

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Abstract

The authors present the case of a 49-year-old man who presented with massive hematochezia and hemodynamic instability, caused by an actively bleeding diffuse non-Hodgkin large B-cell lymphoma of the duodenum. Endoscopic haemostasis was successfully attained with BICAP thermocoagulation using a 10Fr probe at 20W. Later, the patient underwent an elective cephalic duodenopancreatectomy and adjuvant chemo-radiotherapy. To our knowledge, this is the first report on the literature of the use of BICAP probe in the setting of acutely bleeding lymphoma of the small bowel.

INTRODUCTION

The gastrointestinal tract is the most commonly involved site of extranodal lymphomas, representing 30-40 % of all extranodal sites^{1,2}. Primary non-Hodgkin's lymphoma of the gastrointestinal tract represents 3-4% of all malignancies arising in the digestive tract. The most frequent site is the stomach (44%-75% of cases)³⁻⁵. Other locations might be the jejunum or the ileocecal region, while duodenum, colon and rectum are rare⁵. Multiple gastrointestinal lesions are very infrequent. Time-trend analyses have demonstrated an increase of 2.7% per annum in incidence for gastric (6.3%) and small bowel diseases (5.9%)⁶. Gastrointestinal diffuse large B cell lymphoma is a common subtype of extranodal lymphoma⁷, accounting for about 50% of cases. This type represents the majority of small bowel lymphomas and may present with gastrointestinal bleeding^{2,5,8}. Current recommendations support the use of a combined endoscopic approach, such as epinephrine injection followed by clips or thermocoagulation, for patients with nonvariceal upper gastrointestinal bleeding⁹. The bipolar circumactive probe (BICAP) can be used for thermocoagulation, working as a contact method for coaptive coagulation, by pressuring the probe on the lesion while delivering electrical current and generating heat to compress, fuse, and seal the bleeding vessel^{10,11}. Bipolar electrodes complete the electrical circuit when the probe contacts the tissue, and the probe is applied at a low power setting for several seconds, with multiple applications, as necessary. To our knowledge, this is the first report of the use of BICAP for the endoscopic haemostasis of acutely bleeding lymphoma of the small bowel.

CASE PRESENTATION

A 49-year-old Caucasian man with no previous medical history presented with massive hematochezia and hemodynamic instability. Upper endoscopy revealed a large (30mm) and deep ulcer of the distal part of the second portion of the duodenum, with elevated and irregular margins, and a prominent non bleeding visible vessel on the center of the lesion (Figure 1). Endoscopic haemostasis was successfully attained with peripheral injection of 10cc of epinephrine in a 1:10.000 dilution, followed by bipolar circumactive probe (BICAP) thermocoagulation of the vessel in the centre of the lesion using a 10Fr probe at 20W, with no recurrence of bleeding (Figures 2 and 3). Biopsies of the ulcer margins revealed a non-specific neoplastic cell population focally expanding lamina propria. Thoracic and abdominal CT-scan was unremarkable. A cephalic duodenopancreatectomy was performed, revealing an ulcerated neoplasia with 3x3cm, located 4cm distally to the ampulla of Vater. Microscopically, it corresponded to a diffuse non-Hodgkin large B-cell lymphoma, which involved the whole thickness of the duodenal wall. Immunocytochemistry was positive to CD20, CD79a and leukocyte common antigen (LCA) (Figures 4 and 5). Surgical resection was complete, with free margins and disease-negative lymph nodes. PET scan, myelogram and bone marrow biopsy revealed no further involvement by the lymphomatous process. The patient was staged IE B, and underwent adjuvant chemotherapy (four cycles of rituximab plus cyclophosphamide, doxorubicin, vincristine and prednisone, R-CHOP) followed by involved field radiation

therapy (IF-RT). One year after the end of adjuvant therapy, the patient remains asymptomatic and disease-free.

Figure 1

Figure 1– Upper endoscopy: Bleeding duodenal lymphoma with visible vessel



Figure 2

Figure 2 - Upper endoscopy: Endoscopic haemostasis using 10Fr BICAP probe

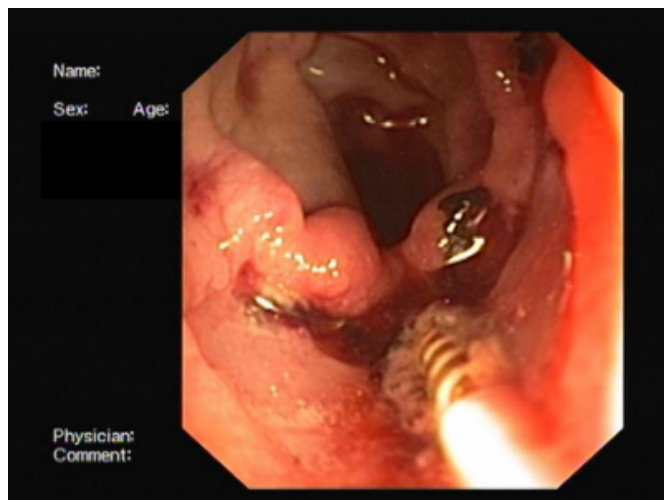


Figure 3

Figure 3 - Upper endoscopy: Second look endoscopy and biopsy sampling

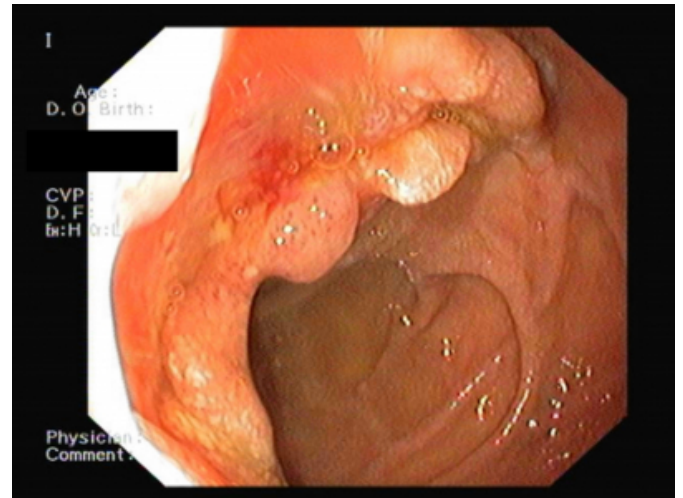


Figure 4

Figure 4 - Microscopy: H&E stain, 200x magnification revealing features of diffuse non-Hodgkin large B-cell lymphoma

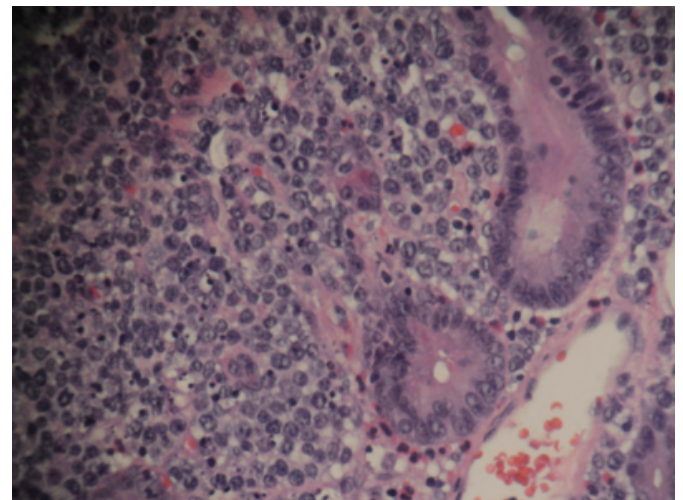
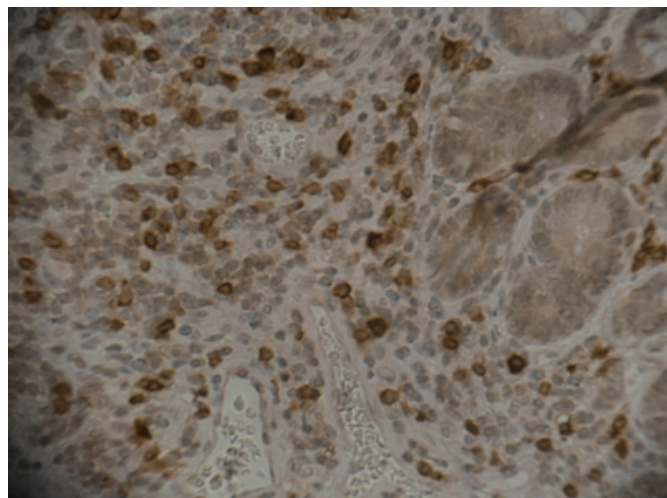


Figure 5

Figure 5 - Microscopy: Immunohistochemistry, 200x magnification showing a CD20+ B-lymphocyte clonality



CONCLUSION

To our knowledge, this is the first report of the use of a BICAP probe in the setting of acutely bleeding lymphoma of the small bowel. The successful haemostasis attained with this endoscopic approach allowed the postponed curative elective surgery. In our practice, the routine use of a two-channel upper endoscope, allowing the passage of a 10Fr BICAP probe through the larger therapeutic channel, as well as the routine full inspection of the second portion of the duodenum in the setting of upper gastrointestinal bleeding, were essential for the successful one-step endoscopic treatment in this patient. The addition of rituximab to cyclophosphamide, doxorubicin, vincristine and prednisone (R-CHOP) is now considered to be the standard regimen for treating localized, primary gastric diffuse large B-cell lymphoma³. It is still debated whether or not it should be performed as unique medical treatment, or as part of a combined treatment, including the surgical resection of the primary. Surgery is sometimes necessary to manage acute complications, such as haemorrhage, abscess, gastrointestinal occlusion or perforation during systemic

therapies, or suggested for prevention of such emergencies^{2,3}.
⁵. In our case study, the endoscopic approach achieved a successful haemostasis in the acute setting, which avoided the need for emergent surgery at presentation. Subsequent elective surgery was determinant for definite diagnosis and staging of the tumour.

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