Abstract. – We describe the case of a delayed bleeding that occurred concomitantly with an abdominoperineal resection. The patient underwent endoscopy without apparent complications. During surgery, and in the immediate postoperative hours, 4 blood units were required to achieve stable conditions even if the surgical technique was correct, no major bleeding occurred and no blood was seen inside the lumen at bowel transection. On the 7th postoperative day (9th from polypectomy) the patient shocked for the first time. Two days later, massive clots appeared from the stoma and he shocked again. CT scan found the bleeding occurring from the polypectomy site and angiographic embolization finally ended the hemorrhage. The increased risk of delayed hemorrhages and their dramatic clinical manifestations render the post-polypectomy “window” period worth to be followed-up strictly. We believe that further invasive procedures, especially major surgery, should be postponed unless emergent and necessary to save the patient’s life.

Key Words: Endoscopic polypectomy, Delayed bleeding, Abdominoperineal resection, Polypectomy complications.

Introduction

Bleeding is the most frequent complication observed after endoscopic polypectomy, occurring in 0.1-1.4% of patients1-4, and in some cases technetium-tagged red blood cell nuclear scintigraphy is necessary to identify blood losses and guide invasive procedures to stop (endoscopy or arteriography)1-4. Among all polypectomy-derived bleedings, delayed episodes represents 34-55% of cases and usually occurs within 2 weeks from the procedure, even if case reports described interval times of up to 29 days2-5. Many factors seem to be related with this particular complication. Their pathogenesis is probably related to the clot dissolution before the complete healing of the wound2, but polyps larger than 17 mm, pedunculated polyps with a stalk diameter > 5 mm, sessile polyps and malignant lesions are also at high risk of hemorrhage following endoscopic excision6. Prophylactic placement of hemoclips has not been shown to decrease its occurrence, while the use of coagulation or blended currents is recommended4,7. Finally, comparable bleeding rates can be achieved with pure cut currents, provided that hemoclips are placed readily after polypectomy4.

We describe in this article a case of delayed bleeding that occurred in concomitance with an abdominoperineal amputation. Polypectomy was performed 2 days before surgery and bleeding manifestations occurred after 9 days, endangering the patient’s life. We also discuss current guidelines with particular regard to the “window” period.

Case Report

A 64 years-old male underwent on March 2005 a laparoscopic left hemicolectomy for a bleeding tumor of the descending colon. He was affected by a moderately differentiated mucinous adenocarcinoma and no nodal metastases were found at the pathologic examination (pT1 pN0 pMx – G2). The patient began routine follow-up, unremarkable until
April 2006 when a low rectal recurrence was found. Colonoscopy diagnosed 3 additional polyps at 60, 21 and 17 cm from the anal verge and another recurrence on the anastomotic rim that also involved the levator ani and the external sphincter (CT scan). For all these reasons, we planned an endoscopic polypectomy of the more proximal polyp and an abdominoperineal amputation that would include both recurrences and the distal polyps.

The patient was admitted to the hospital on May 2006. Preoperative routine evaluation was unremarkable exception made for a moderate anemia (hemoglobin 9 g/L) that was probably related with the tumor bleeding. He underwent polypectomy of the more proximal polyp without apparent complications. Two days later, preoperative hemoglobin was 6.6 g/L. During surgery, and in the immediate postoperative hours, 4 blood units were required to achieve stable conditions even if the surgical technique was correct (no major vascular bleeding occurred) and no blood was seen inside the lumen after bowel transection. Another blood transfusion was required on the 3rd postoperative day to raise hemoglobin from 7.6 g/L to 8.9. On the 7th postoperative day (9th from polypectomy) the patient shocked the first time. Hemoglobin reached 5.9 g/L but no specific signs of hemorrhage were present. Clinical stabilization was achieved with blood transfusions. After 2 days massive clots appeared from the stoma but the emergent colonoscopy could not locate the bleeding site due to massive clots and feces. The patient shocked again and, after clinical stabilization, CT scan found the bleeding site along the hepatic flexure, were the initial polypectomy was performed (Figure 1). Angiographic embolization with superselective catheterization stopped the bleeding (Figures 2 and 3) and the patient remained stable until discharge.

Figure 1. CT scan of the abdomen showing a large collections of blood throughout the colon. Arrow: site of active bleeding.

Figure 2. Angiography. The site of active bleeding derives from a collateral of the right colic artery (arrow).

Figure 3. Superselective catheterization leaving two platinum spirales (arrows).
Delayed bleeding is a specific and often dramatic complication of endoscopic polypectomy, not self-limiting and that usually requires specific treatments to stop. The most important practical difference with immediate episodes is that the delay in diagnosis and definitive treatment seriously endangers the patient’s clinical conditions. Furthermore, immediate bleeding is diagnosed and treated during the first endoscopic examination with complete resolution of symptoms and no further clinical deterioration, while the subtle and intermittent symptoms of delayed bleeding usually draws the attention later on the colonic area, until massive hemorrhages manifest, and definitive treatment is delayed for the patient’s needs of hospitalization, investigation and clinical stabilization.

Delayed bleeding is more frequent during the first 2 weeks after endoscopy, even if a case report described a window-period of 29 days. Although the dangerous nature and the frequent incidence of this complication, most patients that undergo endoscopic polypectomy are not hospitalized and are usually treated on an ambulatory or a day-surgery setting. Our case forced us to review the literature guidelines and we did not find any specific recommendation regarding the immediate post-polypectomy period. For this reason, we planned the abdominoperineal amputation. However, the subsequent dramatic situation experimented raised few considerations. First, given the possibility of a “window” period in which delayed bleedings can manifest, invasive procedures should probably be avoided and reasonably delayed for at least 2 weeks from the initial endoscopy, especially those that are considered risky. In our case the post-polypectomy bleeding added an important risk to a patient that was planned and underwent a major surgical procedure. Second, patients that usually undergo an endoscopic polypectomy are often old and have comorbidities (such as heart or lung diseases) that endanger the tissue oxygenation. Given the consistent possibility of a delayed bleeding, should these patients receive a more stringent follow-up or specific discussions about possible subtle symptoms, suspicious of bleeding, that could manifest after polypectomy? Third, many patients are also on anticoagulants or receive aspirin. Our patient was at increased risk of deep vein thrombosis due to many factors (the primary disease, the postoperative immobility, an intrinsic venous insufficiency of both legs). All of them mandated a postoperative prophylaxis with heparin that probably contributed to the dramatic clinical manifestations. Although urgent, the abdominoperineal resection could have been delayed after the “window” period and the patient undergo both surgery and postoperative anticoagulation without additional risks.

In conclusion, in this case report we wanted to draw the attention on the “window” period that follows endoscopic polypectomies. The increased risk of delayed hemorrhages and their dramatic clinical manifestations, often requiring invasive procedures, render this period worth to be followed more strictly. Furthermore, any invasive procedure that could add risks to patients, especially major surgery, should be postponed unless emergent and necessary to save the patient’s life.

References