

## Diverticular hemorrhage

C. Fitzpatrick, M. Aerts, D. Urbain

Gastro-enterology Department, University Hospital Brussels, Belgium.

### To the editor,

A 54-year-old woman was admitted to our hospital after two episodes of massive rectal bleeding. Her past medical history was significant for insulin-dependent diabetes mellitus, hypertension, diverticular disease, rheumatic arthritis, hypothyroidism, and dyslipidemia. In addition to anti-hypertensive drugs and anti-diabetic drugs, she was taking anti-platelet and non-steroidal anti-inflammatory drugs. There was no previous history of gastrointestinal hemorrhage.

Upon arrival at the emergency room, she was awake and alert, but felt weak and dizzy. On physical examination her blood pressure was low 99/65 mmHg, and she was very pale. Her abdomen was soft, non-distended and non-tender. On rectal examination, fresh blood was noticed on the glove. The initial hemoglobin level was 8,5 g/dL, so the patient received a blood transfusion.

A total colonoscopy was performed after an adequate bowel preparation showing fresh blood and blood clots as well as diverticulosis. After rinsing the colon thoroughly, an active hemorrhage from one specific diverticulum could be identified (Fig. 1). It was injected with diluted adrenaline (1/10000), which stopped the bleed.

More than 40% of low gastro-intestinal bleeds are due to colonic diverticular hemorrhage. Diverticular disease is very common in developed countries, and is mostly asymptomatic. About one-third of the patients manifest the disease with either hemorrhage or inflammation.

Diverticular hemorrhage appears to be caused by chronic injury of the vasa recta adjacent to the lumens of the diverticula. The diagnosis of diverticular hemorrhage is usually made clinically, based on a typical medical history, symptoms and clinical findings, and by ruling out other causes of the bleeding. In the acute setting there is usually too much blood present to be able to visualize the exact site of bleeding during colonoscopy. Emergency visceral angiography and scintigraphy are often not contributive because the volume of blood loss per time unit is too small. It is important to perform a total colonoscopy after the acute setting to exclude other causes of hemorrhage and to confirm the diverticulosis. Visualization of the bleeding diverticulum, as in our patient, is very rare.

Risk factors for developing a diverticular hemorrhage are advancing age, hyperuricemia, hypertension, and the use of non-steroidal anti-inflammatory drugs. Patients often present with a sudden onset of abdominal cramps



Fig. 1. – Image of diverticular hemorrhage during colonoscopy

and the urge to defecate, followed by the evacuation of an often large amount of fresh blood and blood clots rectally. Mostly the blood is bright red as about 90% of all diverticula are situated in the left-sided colon. In rare cases there will be a smaller volume of black/tarry blood loss (melena) due to right sided diverticular hemorrhage. The bleeding usually stops spontaneously, but often recurs in 22-38% after first episodes and up to 50% after second episodes of diverticular hemorrhage.

### References

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Correspondence to : Dr. C. Fitzpatrick, Gastro-enterology Department, University Hospital, Laarbeeklaan 101, 1090 Brussels, Belgium.

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