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Case Report

# Biliary Stent Migration Revealed by Rectal Bleeding: A Case Report

**Benhamdane Ahlame*, Addajou Tarik, Aourarh Benayad, Sair Asmae, Mrabti Samir, Berraida Red, El Koti Ilham, Rouibaa Fedoua, Benkirane Ahmed and Seddik Hassan**

*Department of Gastro Enterolgy II, Military Hospital Mohamed V, Morocco*

***Corresponding Author:** Benhamdane Ahlame, Department of Gastro Enterolgy II, Military Hospital Mohamed V, Morocco.

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## Abstract

**Background:** Endoscopically deployed biliary stents are a well-established method for dealing with biliary diseases. Stent migration is a rare complication, most common with plastic stents. In most cases, the symptoms are abdominal pain, the clinical presentation with rectal bleeding remains an unusual situation.

**Case report:** We report the case of a 72-year-old female patient, was admitted to our department with choledocholithiasis. She underwent an ERCP. Cholangiography revealed a large stone > 15 mm. The endoscopic sphincterotomy was complicated by active bleeding not managed by standard endoscopic hemostasis methods, leading to the indication of a covered metal stent of 6cm/10mm. Three days later, the patient complained of abundant rectal bleeding. Abdominal computed tomography (CT) revealed that the biliary stent had migrated in the coecum. The case was managed by colonoscopic removal of the stent.

**Conclusion:** Biliary stents are the gold standard method for managing malignant and benign biliary obstructions. However, they are also subject to complications including stent migration. Consequently, adequate monitoring of patients after ERCP is important.

**Keywords:** Biliary Stent; Migration; Rectal Bleeding

## Introduction

Biliary stents performed by endoscopic retrograde cholangiopancreatography (ERCP) are well established for the management of various biliary, hepatic or pancreatic diseases, benign or malignant [1]. They are, however, associated with a complication of 15% and a mortality of 1% [2].

Complications of endoscopic biliary stenting include stent migration, cholangitis, stent obstruction, hemorrhage, perforation and pancreatitis [3,4].

Biliary stent migration represents 3% of early complications and to 17% of late complications of endoscopic biliary stent insertion [5]. Migration of biliary stents, either metallic or plastic, is reported in 8-10% of cases [6]. It is more common with plastic stents, the majority of which remain undetected because the stent is eliminated in the feces or remains asymptomatic in the gastrointestinal tract [7].

In addition, covered stents, especially fully covered stents, are at risk for early migration. They might also obstruct the cystic duct or a hepatic duct leading to secondary complications [8,9].

Most clinical manifestations were abdominal pain. However, the clinical presentation with rectal bleeding remains an unusual situation.

We report a case of metallic biliary stent migration revealed by rectal bleeding 3 days after stent placement.

## Case Report

A 72-year-old female patient was admitted to our department with choledocholithiasis. She had a history of high blood pressure and parkinson's disease.

She underwent an ERCP. Cholangiography revealed a large stone > 15 mm. The endoscopic sphincterotomy was complicated by active bleeding not managed by standard endoscopic hemostasis methods, leading to the indication of a covered metal stent of 6cm/10mm.

Three days later, the patient complained of abundant rectal bleeding.

On clinical examination, she was hemodynamically stable and apyretic. Abdominal examination was without abnormalities.

Laboratory investigation showed anemia at 8 g/dl.

Gastroscopy did not show any lesions that would explain the rectorragia.

Abdominal computed tomography (CT) revealed that the biliary stent had migrated in the coecum, without perforation (Figure 1).

**Figure 1:** CT scan of the biliary stent in coecum.

The colonoscopy located the metallic stent lodged within the transverse colon (Figure 2) and this was successfully extracted by forceps (Figure 3-4).

**Figure 2:** Metallic stent in transverse colon on colonoscopy.

**Figure 3:** Metallic stent extracted by forceps.

**Figure 4:** The biliary stent.

The evolution was marked by a clear clinical and biological improvement within a one-month follow-up.

## Discussion and Conclusion

The risk factors for stent migration have not been clearly defined. The most identified are short and larger diameter stents; benign biliary strictures and a common bile duct > 10 mm [10-12].

A distally migrating stent can cause intraperitoneal or retroperitoneal perforations. Symptoms usually present early and typically [13].

According to the literature, most clinical manifestations were paroxysmal abdominal pain. The earliest time of migration was 2 weeks after prosthesis placement and late was 6 months [14]. In a retrospective study by Johanson., *et al.* distal stent migration was asymptomatic in the majority of cases [15]. Stent migration can also cause upper or lower gastrointestinal bleeding [16,17].'

Migration of biliary prostheses can lead to perforation underneath [6]. 92% of perforations occur in the duodenum [18] but can also occur in the distal large intestine and colon [19].

Our patient presented with rectal bleeding without abdominal pain resulting from the migration of the metal stent without perforation, 3 days after its placement. This presentation was unique, not previously reported.

Management of patients with migrated stents needs to be considered given the increased use of biliary stents and the resulting increase in complications and incidence of stent migration.

Current recommendations on the management of migrated stents are minimal, with the only definite recommendation using ERCP to remove stents that are not spontaneously cleared [20]. Which is the case for our patient who recovered with endoscopic management.

In conclusion, biliary stents are the gold standard method for managing malignant and benign biliary obstructions. However, they are also subject to complications including stent migration [21]. Consequently, adequate monitoring of patients after ERCP is important.

We know of no conflicts of interest associated with this publication.

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