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# Arterial embolisation to control haemorrhage following colonoscopic polypectomy

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## KEYWORDS

Arterial embolisation;  
Haemorrhage;  
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polypectomy

## Introduction

Clinically significant bleeding post-colonoscopy polypectomy occurs in 1% of cases<sup>1</sup> and this constitutes 2–5% of all acute lower GI bleeding.<sup>2</sup> The options for controlling post-polypectomy bleeding can be divided into endoscopic procedures, interventional radiology and surgery. We review the case of a 70-year-old gentleman who underwent colonoscopic polypectomy and subsequent arterial embolisation to control bleeding.

## Case presentation

A 70-year-old man with tracheal cancer who was being anticoagulated for Atrial fibrillation and pulmonary emboli, underwent colonoscopy following a PET scan which had detected an abnormality in the sigmoid colon. A 25-mm pedunculated polyp was found in the distal sigmoid colon,

this was excised. A subsequent arterial bleed from the base of the polypectomy site was initially controlled with 4 haemostat clips but the patient continued to bleed and therefore an angiogram was performed. The sigmoid branches of the inferior mesenteric artery (IMA) were embolised using microcoils. The haemorrhage was controlled, he remained haemodynamically stable and made an uneventful recovery. Anticoagulation was restarted two days after embolisation (Figs. 1 and 2).

## Discussion

A recent review by Sorbi et al.<sup>3</sup> of patients with post-polypectomy haemorrhage found that half of the patients required transfusions a median of 5 days from the time of polypectomy and the majority of patients had been on NSAIDs or anticoagulants.

## Colonoscopic procedures

Immediate cessation of bleeding post-polypectomy can be achieved most easily through re-snaring the stalk and

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**Figure 1** Selective IMA study showing extravasation noted adjacent to surgical clips.

applying tamponade. Other options include injection of epinephrine, cauterization, band ligation, haemoclips and use of detachable snare.<sup>4–6,9</sup>

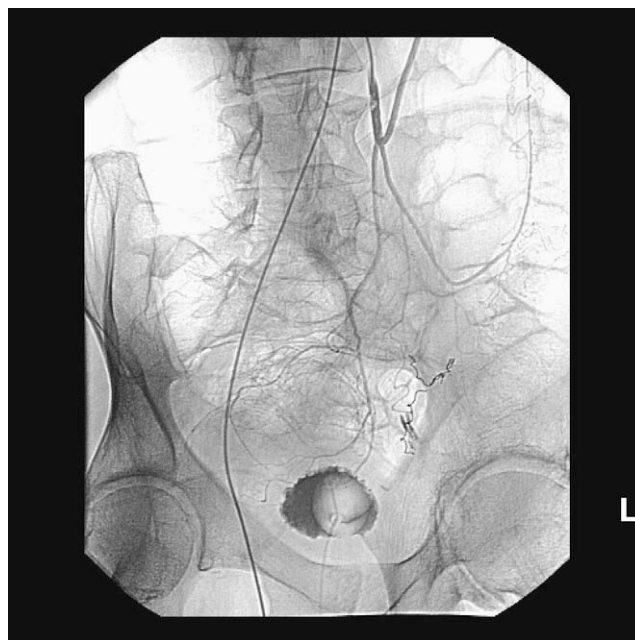
Haemoclips have been used for over 20 years as a way of controlling bleeding during colonoscopy. Hachisu<sup>4</sup> reported primary haemostasis in 84% of various GI bleeding lesions in 51 patients with rare recurrent bleeding. Binmoeller et al.,<sup>5</sup> treated 42 cases of post-polypectomy haemorrhage with haemoclip placement with excellent initial haemostasis. An average of 2.9 haemoclips were placed per patient and bleeding was not precipitated in any patients treated for a non-bleeding visible vessel. Recurrent bleeding occurred in 5.6% and repeat clip placement managed this. The clips dislodge spontaneously and subsequently passed through the rest of the GI tract without complications. In a retrospective review of x patients endoscopic therapy is successful in treating over 95% of patients.<sup>7</sup>

### Interventional radiology

Therapeutic angiography has been used to control colonic haemorrhage with embolisation using microcoils being preferred to intra-arterial vasopressin.<sup>8</sup> They are injected superselectively beyond the marginal artery which achieves arterial occlusion but avoids colonic ischaemia. Patients who fail angiographic intervention or develop signs of colonic ischaemia have may require surgery.<sup>10,11</sup>

### Surgery

If endoscopic or radiological methods of controlling haemorrhage then surgery is required which may necessitate underrunning or segmental colonic resection.



**Figure 2** Post-embolisation; coils in situ, no further bleed seen.

### Conclusion

Most bleeding post-polypectomy can be controlled endoscopically but angiographic embolisation can be successfully performed if endoscopic methods fail.

### Conflicts of interest

None.

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