ENDOVASCULAR DIAGNOSTICS AND TREATMENT OF ACUTE ABDOMINAL BLEEDING AFTER HEPATO-PANCREATO-DUODENAL OPERATIONS

Sergiy Vereshchagin, MD, Mahmud Akhad, MD, Andriy Bogdan

ABSTRACT

Purpose: The aim of this study was to determine efficiency and safety for endovascular methods of diagnosis and treatment of acute abdominal bleedings after operations on the organs of the hepato-pancreato-duodenal region.

Methods: Endovascular methods of diagnosis and treatment were applied in 11 patients with severe recurrent abdominal bleeding that occurred within 2 to 16 days after operations. All patients underwent diagnostic angiography, which showed angiographic symptoms of bleeding - false aneurysm or temporary occlusion (thrombosis) of the aneurysm. In addition, endovascular embolization using metal coils of the Gianturco type, hemostatic sponge fragments and synthetic embol. electro-detachable micro-coils, was performed.

Results: In all 11 patients thrombosis of the arterial branches feeding the source of bleeding was achieved, that was confirmed by control angiography after the embolization. 10 patients were discharged in satisfactory condition. All patients showed angiographic symptoms of bleeding - false aneurysm or temporary occlusion (thrombosis) of the damaged artery:
- 3 - basin of the proper hepatic artery
- 4 - basin of the gastroduodenal artery
- 3 - basin of the superior mesenteric artery
- 1 - basin of splenic artery (transverse pancreatic artery).

Conclusions: Endovascular treatment of postoperative recurrent bleeding is highly effective and organ-preserving method. Selective angiography in all cases allowed to identify the source of bleeding, and subsequent super-selective transcatheter embolization allowed to achieve reliable hemorrhostasis without extremely high risk of repeated open surgery.

BACKGROUND

Treatment of recurrent, especially massive abdominal bleedings that occur in postoperative period and laparoscopic surgery on the organs of hepato-pancreato-duodenal region is a difficult task for emergency surgery. Postoperative lethality of this category of patients, especially elderly patients, remains reasonably high (according to various sources of literature, it ranges from 30% to 80%). Endoscopy and CT do not always show the source of bleeding. Conservative therapy is often ineffective. Repeated open surgery in the patients with the critical condition and unstable hemodynamics poses a huge risk. That's why endovascular methods of diagnosis and stopping of abdominal bleeding become more and more important due to their low traumatism and high efficiency.

RESULTS

In all 11 patients thrombosis of the arterial branches feeding the source of bleeding was achieved, that was confirmed by control angiography after the embolization. As a result, in all cases, a persistent hemostatic effect was achieved without complications requiring subsequent surgical intervention. In 10 patients after stabilization of hemodynamics, correction of blood loss and prophylactic antibiotic therapy were discharged in satisfactory condition. 1 patient, despite successful transcatheter hemostasis, died due to the increase of multiorgan failure and purulent-septic process (liver abscesses) occurring at the time of embolization.

CONCLUSION

Endovascular treatment of postoperative recurrent bleeding is highly effective and organ-preserving method. Selective angiography in all cases allowed to identify the source of bleeding, and subsequent super-selective transcatheter embolization allowed to achieve reliable hemorrhostasis without extremely high risk of repeated open surgery.