

Argon Plasma Coagulation Colonic Perforation: Review of A Case

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ABSTRACT

Argon plasma coagulation (APC) is a haemostatic process used in gastrointestinal tract angiodysplasias. Colonic perforation is a rare complication and only nine cases have been published in literature. Treatment of colonic perforation is exclusively surgical. The aim of this article is to report a new case of APC colonic perforation. A 73-year-old man has been admitted for iatrogenic colonic perforation. He is followed in the gastroenterology unit for colonic angiodysplasia. At the third session of APC, the 16/02/2011, he presented abdominal pain and distension. Chest X-ray showed a pneumoperitoneum, which was an indication for emergency surgery. The patient had a laparotomy approach five hours after perforation. The peritoneal cavity was clean. Intra-operative findings showed a linear perforation of 5 mm long of the anterior region of the cecum and there were no abnormalities in the remaining colon. The cecal wound was sutured. The post-operative course was uneventful and the patient was discharged on the 4th post-operative day. APC is a more and more used hemostatic method, notably in the treatment of colonic angiodysplasias. Colonic perforation is a rare complication of this technique. Treatment is exclusively surgical.

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Key words: Angiodysplasia; Argon plasma coagulation; Intestinal perforation

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INTRODUCTION

Argon plasma coagulation (APC) is a haemostatic process used in gastrointestinal tract angiodysplasia^[1]. Colonic perforation is a rare complication and only nine cases have been published in literature^[2]. Treatment of colonic perforation is exclusively surgical. The aim of this article is to report a new case of APC colonic perforation.

CASE REPORT

A 73-year-old man, with previous history of diabetes mellitus, arterial hypertension and coronary heart disease, has been admitted for iatrogenic colonic perforation. He is followed in the gastroenterology unit for colonic angiodysplasia (cecum and transverse colon) for which he already had two APC sessions without incidents. At the third session, the 16/02/2011, he presented abdominal pain and distension two hours after APC. On examination, he was afebrile, his abdomen was very distended, bloated, and tympanic on percussion, without signs of peritoneal irritation. Rectal examination was painless. Chest X-ray showed a pneumoperitoneum, which was an indication for emergency surgery. The patient had a laparotomy approach five hours after perforation. The peritoneal cavity was clean. Intra-operative findings showed a linear perforation of 5 mm long of the anterior region of the cecum corresponding to the site of cecal angiodysplasia which was treated by APC this session (Figure 1). There were no abnormalities in the remaining colon. The cecal wound was sutured without biopsy. The post-operative course was uneventful and the patient was discharged on the 4th post-operative day.

DISCUSSION

Our case is interesting because there wasn't neither stoma nor colon resection. In fact treatment of colonic perforation is exclusively surgical, consisting in suturing the perforation if quickly diagnosed and operated, as in our case, five hours after perforation. However, when perforation is lately diagnosed or if there is a peritonitis, resection of the colon is mandatory^[2]. APC complications include abdominal pain and bloating, rectovaginal fistula, stenosis and perforation, as in our patient. APC colonic perforation is rare with a rate of 0.27% out of 1062 patients, and only nine cases have been

published in literature up to 2007^[2,3]. Perforation can be caused by repeated coagulation of the same site. In depth- coagulation directly depends on the power and length of coagulation, and perforation is therefore possible. The use of low-power coagulation (45 Watts), low-argon output (0.7L/min), and the reduction of contact time thus allow to avoid colonic perforation . Another explanation for colonic perforation is the accumulation of gases (hydrogen and methane) in the colon. These gases, added to argon plasma , favour colonic explosion and the resulting perforation^[4]. This can be avoided by



Figure 1 5 mm cecal Perforation.

means of adequate colonic preparation^[4].

CONCLUSION

APC is a more and more used hemostatic method, notably in the treatment of colonic angiodysplasias. Colonic perforation is a rare complication of this technique. Treatment is exclusively surgical.

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