

Gastric angiodysplasia treated with argon plasma coagulation: A report of two cases

Argon plazma koagülasyon ile tedavi edilen gastrik anjiodisplazi: İki olgu sunumu

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Angiodysplasias are rare but important causes of gastrointestinal bleeding that are commonly seen in the colon but rarely in the stomach. Although various endoscopic modalities are used for the treatment of these lesions, argon plasma coagulation is the most commonly used approach. We present a report of two cases of gastric angiodysplasias leading to overt gastrointestinal bleeding, which were successfully treated with argon plasma coagulation. The procedure is a safe, effective and easy to use modality for the treatment of gastric angiodysplasias that present with overt gastrointestinal bleeding.

Anahtar kelimeler: Gastric angiodysplasia, argon plasma coagulation, bleeding

Anjiodisplaziler nadir fakat gastrointestinal kanamanın önemli bir sebebidir. Yaygın olarak kolonda görülmekle birlikte nadir olarak midede de saptanır. Bu lezyonların tedavisinde farklı endoskopik tedavi yöntemleri kullanılabilmektedir. Günümüzde argon plazma koagülasyon en sık kullanılan yöntemdir. Burada argon plazma koagülasyon ile başarılı şekilde tedavi edilmiş aşikar kanamaya sebep olan iki gastrik anjiodisplazi vakası sunuyoruz. Bu lezyonların argon plazma koagülasyon ile endoskopik tedavisini tartıştık. Argon plazma koagülasyon'un aşikar kanama ile başvuran gastrik anjiodisplaziler'in tedavisinde güvenli, etkili ve kolay uygulanan bir tedavi yöntemi olduğunu düşünmekteyiz.

Key words: Gastric anjiodisplazi, argon plazma koagülasyon, kanama

INTRODUCTION

Vascular ectasias consist of angiodysplasia (AD), gastric antral vascular ectasia (GAVE) and telangiectasia. ADs are thin-walled tortuous vessels found in any part of the gastrointestinal (GI) tract. In endoscopy, they are typically seen as discrete, flat, or slightly raised bright red lesions 2 to 10 mm in size, often with fern-like margins and a surrounding paler rim (1,2). Gastrointestinal ADs are the most common vascular malformation of the GI tract in the general population. Most AD patients are elderly (2) though the prevalence of ADs in the general population is unknown since most are asymptomatic (3). These lesions have been detected more frequently with advances in endoscopic imaging and therapeutic techniques and mortality related to these lesions has significantly decreased (2). ADs are primarily located in the colon (80%), less frequently in the small intestine (15%), and quite rarely in the stomach, (4) and are associated with diabetes aortic stenosis, chronic renal failure and Von Willebrand disease (2). Most patients with ADs do not bleed and rarely cause overt GIB (5). Small intestine ADs are the most common causes of

bleeding in patients older than 50-60 years (6) but bleeding caused by gastric ADs is rarely seen (7).

Despite different methods used in the treatment of ADs, most gastroenterology clinical practices typically treat lesions with APC in (2,3). In the present case report, we discuss gastric ADs treated with argon plasma coagulation.

CASE PRESENTATION

Case 1

A 43-year-old female presented with melena. The patient's blood pressure, pulse rate and body temperature were normal at baseline evaluation upon admission. On physical examination, the patient's general status was normal except for melena in the digital rectal examination. In laboratory evaluation, complete blood count analysis and biochemical values were normal.

Endoscopy showed an AD near the cardia that was not ac-



Figure 1. Endoscopic view of the AD near the cardia

tively bleeding (Figure 1). The setting of APC (BOWA, Germany) was 40 watts and the flow of argon gas was 1.5 liter/min. The lesion was treated with APC with no complications. The patient was subsequently treated with a proton pump inhibitor (lansoprasole 60 mg/day peroral) and has been in a stable clinical condition during the follow-up period; no lesion was found in the control endoscopy after one month post-treatment.

Case 2

A 61-year-old male was admitted to the hospital, presenting with melena and palpitation. On admission, the initial examination revealed pale skin, and melena was seen in the digital rectal examination. Blood pressure was 90/60 mmHg and heart rate was 90 per minute. The patient's laboratory results were normal except for hemoglobin of 8.8 g/dL (normal: 11-18).

Endoscopy revealed an AD in the lesser curavatura gastric body that was not actively bleeding (Figure 2). The setting of



Figure 2. Endoscopic view of AD in the lesser curavatura, gastric body

APC (BOWA, Germany) was 40 watts and the flow of argon gas was 1.5 liter/min. This lesion was treated with APC and no complications related to APC therapy were seen. The patient was subsequently treated with a proton pump inhibitor and improved during the follow-up period; the clinical status completely resolved.

DISCUSSION

Most ADs do not bleed but they may cause either occult bleeding that often leads to iron deficiency anemia, or overt bleeding, presenting with hematemesis or melena, which are responsible for approximately 4-7% of upper GIB (1,3,8). Endoscopic, medical and surgical therapy are used in the treatment of ADs (3). Resolution of anemia, reduced transfusion requirements and reduction of rebleeding are treatment aims with bleeding GI ADs (5). Treatment of non-bleeding lesions is generally not recommended (2). Endoscopic modalities are most widely used for the treatment of ADs. Various endoscopic modalities are used for the treatment of these lesions, including sclerotherapy, multipolar electrocoagulation, argon and Nd:YAG laser photocoagulation and APC. Surgery and medical treatments such as somatostatin analogs and estrogen with progesterone are sometimes used for patients who have failed in endoscopic treatment or with challenging lesions to manage endoscopically due to location and number (1-5). Even if medical or endoscopic treatment is not applied, nearly half of the lesions with bleeding spontaneously stop, but rebleeding is seen in almost a quarter of the patients undergoing endoscopic treatment and at follow-up these patients often need blood transfusions (3,4).

APC is a non-contact electrocoagulation device that uses a high-frequency monopolar current conducted to target tissues through ionized argon gas. APC was first introduced and utilized in surgical and laparoscopic procedures and adapted for use in flexible endoscopy in 1991; its use has become widespread. It is easy to use and is an effective endoscopic treatment method that permits tangential application with challenging lesions. It is safer and less costly than using a Nd:YAG laser due to the limited depth of the thermal effect in the tissue caused by APC. It has a low rebleeding rate except for uremic patients (1,8,9). However, APC may lead to minor complications such as transient abdominal pain and bloating and major complications such as perforation, colon explosion and even death (9,10).

Currently, APC is widely used in the treatment of various lesions, especially vascular ectasia, including GAVE, angiodysplasia, telangiectasia, and radiation induced enteropathy and proctopathy (3,8,11,12). It has become the most commonly used endoscopic method for these lesions and is effective for the treatment of angiodysplasia with active bleeding (8,13,14). However, the efficacy of endoscopic therapy for

GI ADs has not been proven in randomized, controlled studies (15). Moreover, APC has been used with different power levels ranging from 30 to 100 W and flow rates of argon gas from 0.8 to 2 liter/min in the treatment of vascular ectasia. There are no studies comparing different power settings and flow rates for efficacy and safety for this application (8).

As in both our cases, despite the fact that the lesions were tangential, we treated these lesions successfully with APC. No

complications related to APC occurred and after treatment no blood transfusions were needed. We also saw that the lesion in one of the patients was no longer present in the follow up control endoscopy.

In summary, we report of two cases of gastric AD causing overt upper GIB that were successfully treated with argon plasma coagulation (APC), which is a safe, effective and easy to use treatment modality of bleeding with these lesions.

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