Research Paper

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A Case Report on Acquired Aortodeudenal Fistula.

Medical Science

KEYWORDS :

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ABSTRACT

We describe a case of primary aortoenteric fistula (PAEF) in a patient with upper gastrointestinal bleeding. Primary aortoenteric fistula is a rare but clinically important cause of catastrophic gastrointestinal bleeding. The diagnosis of PAEF is difficult and sometimes not made until laparotomy. Primary aortoenteric fistula should be considered in any patient known to have an abdominal aortic aneurysm who presents with upper gastrointestinal bleeding when no identifiable source of bleeding is found on upper endoscopy. Computed tomography may confirm the diagnosis and emergency exploratory laparotomy should be done as soon as the diagnosis is considered clinically.

Introduction

Primary aortoenteric fistula (PAEF) is a rare but clinically important cause of catastrophic upper gastrointestinal hemorrhage. A review of literature reveals that of the nearly 250 cases of PAEF reported, only 112 patients were treated with emergency laparotomy. Only 59 patients were reported to be alive and well at their most recent follow-up.[1] These results illustrate the difficulty in establishing an early diagnosis and show that failure to do so results in high mortality. A large autopsy series reported an incidence of 0.04% to 0.07% of PAEF occurring in 0.69% to 2.36% of patients with an aneurysm of the abdominal aorta.[2] Secondary aortoenteric fistulas, or fistula formation after surgical repair of an abdominal aortic aneurysm, have been reported to occur in 0.4% to 4.0% of patients.[3,4] We report a case of PAEF in a 43-year-old man.

CASE REPORT

A 65 year male patient present with intermittent episodes of abdominal pain, hemetmesis and melana from 2 months. He had undergone number of investigations but they all are fail to reach the perfact diagnosis. That patient admitted in our hospital with hemetmesis and hypotension. We have admitted the patient and resuscitated. At that time patient's Hemoglobin was 5.5 and under go 4 pcv transfusion. After stabilizing the pt we done upper GI scopy which was inconclusive , no blood in stomach and dueodenum at that time.

Than after 24 hrs patient having again the episode of hemetmesis around 400 ml of blood, and undergone further 2 pcv transfusion. Than we have done bronchoscopy which was absulately normal. Than we have done ct abdomen and thorax with CT angiography. Which shows the 20x15 mm size contrast filled outpouching just before the bifurcation on left side.

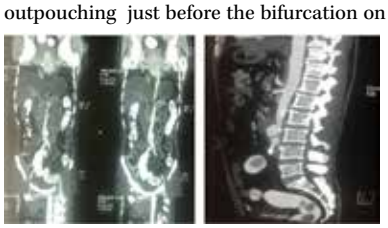

Fig 1 CT Scan images of Aortoduedenal fistula

After 48 hours patient having third episode of hemetmto operation theater and did upper GI scopy followed bt laprotomy. Upper GI scopy this time shows some blood in third part of dueodenum. On exploratory laprotomy aortodueodenal fistula was found. We have done aorto bifemoral with Dacron graft with repair of fistula. Pt was kept NBM for 5 days with parentral nutrition. Patient was postoperatively stable throughout the course and discharged agfter 12 days. After 1 month of follow up pt is stable.

Fig 2 perop findings of aorto duodenal fistula.

Discussion

Fistula formation between the aorta and the intestinal tract was first described in 1839 in reference to a man with a "pulsating tumor . . . and a discharge of blood by stool," who died suddenly. At autopsy, it was noted that "the jejunum had adhered to . . . the aneurismal bag and that sac had ulcerated into the intestine." Communications between the aorta and the intestine resulting from disease at either site are referred to as primary aortoenteric fistulas. Fistulas occurring after aortic reconstructive surgery, also called aortic graft-enteric fistulas, are considered secondary aortoenteric fistulas. Before 1960, the most common cause of abdominal aortoenteric fistulas was aortic aneurysm, followed by infectious aortitis due to syphilis or tuberculosis. [6,7] However, over the past three decades or so, erosion of the intestine by prosthetic vascular grafts has become a much more common cause, with an incidence of up to 4%.[8]

Primary aortoenteric fistula is rare and is usually caused by an untreated abdominal aortic aneurysm.[9,10] It is often discovered unexpectedly during exploratory laparotomy and is usually

not considered as a presumptive preoperative diagnosis.[11] The third portion of the duodenum, being fixed retroperitoneally and in proximity to the descending aorta, is the bowel segment most vulnerable to vascular impingement. The process originates when ischemia and subsequent necrosis of the intestinal wall occur as a consequence of repetitive traumatic pulsations of an adjacent aortic aneurysm. Subsequent rupture of an expanding aneurysm or perforation of the aorta as a result of contamination with gastrointestinal contents results in the formation of a communication with the bowel and the potential for rapid exsanguination. Bacterial, syphilitic, and tuberculous forms of aortitis are rare infectious causes of this type of fistula. Carcinoma, radiotherapy, peptic ulcer, gallstones, diverticula, and foreign bodies have all been implicated as causes of fistula formation.

Although the typical symptoms of PAEF consist of abdominal pain, gastrointestinal hemorrhage and a pulsatile abdominal mass, this classic triad of symptoms can be found in only 23% of the patients.The characteristic picture is of a "herald" hemorrhage followed hours, days, or weeks later by catastrophic hemorrhage. The herald bleeding is the result of a small fistula tamponaded by thrombus formation. If the fistula continues to expand or the occluding thrombus is removed, massive hemorrhage results. Since 70% of patients survive at least 6 hours after the initial bleeding episode and up to 50% survive 24 hours, a herald hemorrhage should be viewed as an opportunity for prompt intervention.

An aggressive diagnostic workup and a high index of suspicion are required for successful outcome in cases of PAEF. Endoscopy of the upper gastrointestinal tract should be strongly considered as the first step in diagnosis. The sensitivity of upper gastrointestinal endoscopy in detecting aortoenteric fistula is unknown, but this technique probably identifies less than half of cases. However, endoscopy may disclose another cause of bleeding (bleeding peptic ulcer with stigmas of recent bleeding). By no means do normal findings or positive findings of gastritis or ulcers without active bleeding rule out aortoduodenal fistula. Careful inspection of the distal duodenum should be done in the setting of unexplained torrential bleeding. Computed tomography with contrast is the most suitable diagnostic test when an aortoenteric fistula is suspected.The CT may show an abnormal communication between the aorta and the bowel or may disclose loss of continuity of the aneurysmal wall and air bubbles in the aneurysm wall that are pathognomonic for the existence of a fistula. Percutaneous angiography may be considered but is rarely of value since most patients are critically ill when the decision for angiography is made.

Emergency exploratory laparotomy should be done as soon as the diagnosis is considered clinically.Mortality is 100% without surgical intervention. Current recommendations for treatment without evidence of gross contamination are for culture and debridement of the aneurysmal aorta, repair with an in situ rifampicin-soaked prosthetic graft, and a primary repair of the gastrointestinal tract.[1] Postoperatively, the patient should be treated with broad spectrum antibiotics. If the cultures are positive, antibiotic therapy should be continued for 4 to 6 weeks.[1]

Conclusion

The diagnosis of PAEF is difficult and sometimes not made until exploratory laparotomy. The diagnosis should be considered in any patient known to have an abdominal aortic aneurysm and who exhibits upper gastrointestinal bleeding when no source of bleeding is seen in upper endoscopy. Computed tomography may confirm the diagnosis. Exploratory laparotomy should be done as soon as the diagnosis is contemplated to decrease the high mortality rate.

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