



Clinical Profile and Management of Acute Mesenteric Ischaemia with peritonitis: A retrospective study

KEYWORDS

Ischemia, gangrene

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ABSTRACT Acute mesenteric ischemia(AMI) is a life threatening surgical emergency. While early diagnosis offers an opportunity for mesenteric revascularization, those patients presenting with signs of peritonitis invariably have ischemia of bowel. Therefore high degree of suspicion of the condition in high risk individuals and prompt investigation with CT scan can reduce the risks of morbidity and mortality associated with the condition. In this study we present our experience in managing patients with acute mesenteric ischemia and associated peritonitis

Introduction

Acute mesenteric ischemia(AMI) is a clinical challenge which requires high degree of suspicion for diagnosis. Development of signs of peritonitis in such patients suggests bowel ischemia and gangrene. It is of paramount importance to arrive at timely diagnosis which can reduce the risks of morbidity and mortality. Contrast CT scan of abdomen is the cornerstone for preoperative diagnosis. Surgical treatment can benefit even in situations with frank bowel gangrene. In this retrospective study we have put forth our experience in management of patients with AMI associated peritonitis.

Materials and Methods

This study is a retrospective study. Medical records of patients who presented with acute mesenteric ischemia(AMI) during the period between October 2012 to September 2015 were retrieved and studied. The clinical profile and management of all such patients were studied.

Inclusion criteria: All adult patients who were found to have bowel gangrene secondary to mesenteric vascular pathology were included in the study

Exclusion criteria: Patients diagnosed to have mesenteric ischemia, but not subjected to laparotomy were excluded from the study.

Results

During the aforementioned study period, 23 patients were diagnosed to have bowel gangrene secondary to AMI. The average age of patients presenting with AMI was 54 years. Male outnumbered females(17 males vs 6 females). 19 patients(82.6%) were hypertensives. 14 patients(60.8%) were smokers and 15 patients (65.2%) were diabetics. Contrast CT scan of abdomen was done in 15

patients. CT scan revealed SMA thrombosis in 6 cases and SMV thrombosis in 4 cases. CT scan detected bowel ischemia in 13 patients(84.6%). During surgery 4 patients were found to have extensive bowel gangrene involving small and large bowel which was incompatible with life. 2 of these 4 patients had thrombosis of superior mesenteric artery(SMA) and the remaining 2 had non-occlusive mesenteric ischemia(NOMI). 19 patients underwent limited bowel resection. Post operatively patients were managed initially with low molecular weight heparin and subsequently anti-coagulated with warfarin group of drugs.

Discussion

Acute mesenteric ischemia is a catastrophic condition characterized by compromised blood supply to bowel. AMI can occur following a thrombotic obstruction to mesenteric vasculature, embolism, mesenteric vein thrombosis and non-occlusive mesenteric ischemia(1). Patients with AMI tend to have exaggerated symptoms as compared to clinical signs(2). Early in the course of the disease, there is scope for revascularization. However with persistence of mesenteric vascular occlusion gangrene of bowel sets in, there by significantly increasing the morbidity and mortality risks. Because of non specific nature of symptoms a high index of suspicion is pre requisite for early diagnosis. In addition to biochemical markers for bowel ischemia, CT scan is invaluable in diagnosing the condition(2,3). CT scan in addition to giving information on the underlying pathology, predicts the possibility of bowel ischemia which in turn warrants early surgical intervention. In select cases where diagnosis is established before the onset of bowel gangrene, revascularization can be achieved(4). In other cases where bowel gangrene is encountered during laparotomy, resection of gangrenous segments of bowel is done. In select situation a second look laparotomy may also be required.

REFERENCE

1. Stone JR, Wilkins LR. Acute mesenteric ischemia. Tech Vasc Interv Radiol. 2015 Mar;18(1):24-30. doi: 10.1053/j.tvir.2014.12.004. Epub 2014 Dec 29 2. P Renner, K Kienle, MH Dahlke et al. Intestinal ischemia: current treatment concepts. Langenbecks Arch Surg (2011) 396:3–11 3. E. Mc Carthy, M Little, J Briggs et al. Radiology and mesenteric ischemia. Clin Radiol. 2015 Jul;70(7):698-705. doi: 10.1016/j.crad.2015.02.012. Epub 2015 Mar 23 4. Stefan Acosta. Surgical management of peritonitis secondary to acute superior mesenteric artery occlusion