



Intraoperative Endoscopy – an Emerging Diagnostic Tool in Difficult Surgical Conditions : a Case Report

KEYWORDS

•Intraoperative • Endoscopy • Anastomotic leak

Dr J. M. Bagwan

Junior Resident in Department Of Surgery, Department Of Surgery, D. Y. Patil Hospital And Research Centre, Kolhapur.

Dr V. V. Gaikwad

Associate Professor, Department Of Surgery, D. Y. Patil Hospital And Research Centre, Kolhapur.

Dr A. D. Chougale

Professor, Department Of Surgery, D. Y. Patil Hospital And Research Centre, Kolhapur.

Dr R. M. Kulkarani

Professor & HOD, Department Of Surgery, D. Y. Patil Hospital And Research Centre, Kolhapur.

ABSTRACT 40 years old male operated for gastrojejunostomy had postoperative episodes of spikes of fever. All possible causes for postoperative fever were ruled out. On the basis of clinical condition and CT scan showing collection, patient was posted for re-exploratory laparotomy. There was no visible perforation seen however to rule out microperforation an intraoperative endoscopy done and it was ruled out.

Introduction:

In 1958 Hirschowitz introduced the first clinically useful flexible fiberoptic endoscope, which has been extensively used over years for diagnosis of upper gastrointestinal tract and colon. However the intraluminal examination of small bowel still remains a problem. Capsule endoscopy and enteroscopy although being noticed more and more, an option of intraoperative endoscopy for detecting small bowel lesion especially for bleed is becoming increasingly popular. Intraoperative endoscopy also can be applied for detection of some of the postoperative anastomotic problems like leak, stricture etc... [1,2].

Case Report:

40 Years old male patient operated for gastrojejunostomy. The patient developed postoperative spikes of fever. The other routine causes of postoperative fever like wound infection, post folleys catheter ascending UTI, chest complication, intravenous cannula thrombophlebitis were ruled out. The USG performed on POD-8 which was normal and patient managed conservatively. On POD-15 because the fever continued CT abdomen was done which showed intrabdominal collection. So decision for laparotomy was done. A thorough exploration of all possible causes and areas was done. The anastomotic site appeared normal and no obvious perforation seen. However to rule out a possibility of microperforation a gastroscope was passed intraoperatively at gastrojejunostomy site. Lot of air was insufflated resulted in distension of stomach, anastomosis and jejunum. Abdominal cavity was completely filled with normal saline and the anastomotic site was down the saline level. There was no escape of air bubble. A diluted methylene blue solution was sprayed on anastomotic site through a cannula of working channel of gastroscope. With the help of endoscopic transillumination both absence of escape of air bubbles and change of clear fluid colour into methylene blue colour was confirmed (fig 2).



(Fig 1)



(Fig 2)

Thus ruled out any microperforation. The abdomen was closed after thorough peritoneal lavage and drain kept. Postoperative recovery was uneventful. Patient was discharged home on POD-10.

Discussion:

Intraoperative endoscopy is being recently popularised. It is a reasonably easy technique as the scope can be accurately guided through the difficult flexures and loops of intestine during a laparotomy. Excellent transillumination with recent light sources, high definition endovision system give a very clear view of the mucosa of gastrointestinal tract [3]. Therapeutic procedures like polypectomy, endotherapy for bleeding lesion can be performed. As the abdomen is open, bigger lesion not amenable to endoscopic therapies can undergo relevant surgical treatment like resections, suturing etc... [4,5].

Here we report use of intraoperative endoscopy to detect a microperforation possibly responsible for post operative intra-abdominal collection.

Conclusion:

In difficult situation of postoperative collection in the abdomen after upper gastrointestinal anastomosis, an intraoperative endoscopy is an accurate and cost effective method of diagnosis of anastomotic leak.

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