

Case Report on Intestinal Obstruction

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Abstract

Introduction: Intestinal obstruction exists when blockage prevents the normal flow of intestinal contents through the intestinal tract. Two types of processes can impede this flow: 1) Mechanical obstruction: An intraluminal obstruction or a mural obstruction from pressure on the intestinal wall occurs. 2) Functional or paralytic obstruction: The intestinal musculature cannot propel the contents along the bowel. The blockage also can be temporary and the result of the manipulation of the bowel during surgery.

Clinical Findings: Pain in the lower abdomen, not passed stools and gases, fever (99.6°C), nausea vomiting.

General Examination: Height: average, Weight: 50 kg, Blood pressure: 110/70, pulse: 78 b/m, Respiration: 18b/m Temperature: 98.6

Diagnostic Evaluation: Hb=10%, PLT= 3.7, HBSAG- non reactive Blood test: Hb – 9.7gm%, APTT= 29.50, PLT=3.72, HBsAg – non reactive, CEA= 0.73, CA 125= 11.9, Peripheral Smear: RBCs- Normocytic mildly hypochromic RBCs seen. Platelets- Increased on smear. No hemiparasite seen.

Conclusion: My patient aged 20 years old female was admitted to surgery ward intestinal obstruction and she had complained of lower abdominal pain, not passed stool for 3 days and fever.

Keywords: Intestinal obstruction; Intestinal volvulus

Introduction

Intestinal obstruction exists when blockage prevents the normal flow of intestinal contents through the intestinal tract [1]. Two types of processes can impede this flow.

1. Mechanical obstruction: An intraluminal obstruction or a mural obstruction from pressure on the intestinal wall occurs.
2. Functional or paralytic obstruction: The intestinal musculature cannot propel the contents along the bowel. The blockage also can be temporary and the result of the manipulation of the bowel during surgery [2,3].

An intestinal obstruction is one of the frequent surgical disorders in general surgical practices. Bowel obstruction can be classified in to various types. It can be mechanical or non-mechanical according to the mode of obstruction. Impairment to the abnormal passage of intestinal contents can result from either a mechanical obstruction to the bowel or even failure of normal intestinal motility in the absence of an obstructing lesion [4].

Patient identification

A female 20 years from Wardha was admitted to surgery ward no- 28, AVBRH on 30 May, 2021 diagnosed as the case of intestinal obstruction. She weighs 30 kgs with a height of 150 cms.

Present medical history

A female aged 20 years old was brought to AVBRH on 30 may 2021 by her parents with complaints of lower abdominal pain, not passes stool or gases, nausea, vomiting and fever from 3 days for which she was admitted to surgery ward no-28. She is a case of intestinal obstruction and her hemoglobin level at the time of admission was 8.7 gm%. The female is weak and did not attain menarche to date.

Past medical history

My patient has a history of fever 4 days before the admission. Which the patient's parents reported as malaria (document not available for

the diagnosis of malaria) and treated it at home. Diagnosis discussion was done on 30/5/2021 and later her report confirmed to have intestinal obstruction on 30/5/2021. Till that duration, she was admitted to the hospital from time to time for the treatment.

Family history

My patient's family comprises four members. She was diagnosed to have intestinal obstruction with no abnormal genetic history from her parents. The parents had a non-consanguineous type of marriage. Except for the patient admitted to the hospital. Other family members don't have any complaints regarding their health.

Past intervention and outcome

Abdominal pain being the chief complaint of the patient, which was later diagnosed as intestinal obstruction through the report on 30/5/2021.

Clinical findings

Pain in the lower abdomen not passed stools and gases, nausea, vomiting, fever (99.6°C).

Physical examination

It was found that the patient had there is gross dilatation of small bowel loops measuring up to 4-5 cm in diameter, involved jejunum and almost proximal mid and distal from ultrasonography. On thorough examination from head to foot, a visible aberrant zone of transition

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in right para-umbilical region with collapsed distal bowel loops. On further palpation it was found to occupy the features suggestive of intestinal obstruction at the level of distal ileum, possibly secondary to adhesion. The girl is thin, weak and has dull look. She is well oriented with the date, time, and place is cooperative.

Diagnostic assessment

1. Blood test: Hb – 9.7gm%, APTT=29.50, PLT=3.72, HBsAg – non reactive, CEA=0.73, CA 125=11.9, Peripheral Smear: RBCs-Normocytic mildly hypochromic RBCs seen. Platelets-Increased on smear. No hemiparasite seen.

2. Ultrasonography: CECT Abdomen

3. Bowel: Evidence of abnormal dilation of small bowel noted. The ascending colon, hepatic flexure and proximal transverse colon also show dilatation. The transition point suspected at proximal transverse with e/o clumping of mesentery and bowel. There is suspicion of intussusception at this point. Distal to colon is collapsed.

Mild free fluid notes in abdomen and pelvis.

Few 5-7 µm homogeneously enhancing lymph nodes are noted in mesentery, likely reactive.

4. Liver: Is normal in size (13.5cm), shape and enhancement pattern. No evidence of EHBD & IHBD is noted. It is normal in size. Intrahepatic part of IVC & hepatic veins is normal.

5. Gall bladder: Appears normal. Wall thickness is normal. No evidence of any calculus.

6. Pancreas: Appears normal.

7. Stomach: Is well defined no evidence of wall thickening. That fat planes between stomach wall and the patient appears normal.

8. Spleen: Is normal in size (8cm), shape, axis and enhancement pattern splenorenal ligament appear normal.

9. Kidneys: Both the kidneys are normal in size (Right 10×5.4cm, Left 11.3×4.8), shape and axis. No evidence calcification. No evidence of any pelvicalyceal dilatation. Cortical phase, nephrographic phase and parenchyreas are normal.

10. Urinary bladder: Empty with foleys in-situ.

11. Uterus: Appears normal in size 5×3.5×2.5cm, Shape and axis. No adnexal mass noted.

12. Impression CECT abdomen reveals

Intestinal Obstruction of Small Bowel and Proximal Large Bowel with Transition Post

Proximal Transeverse Colon

13. Advise: Clinical Correlation

14. Histopathology report: Intestinal obstruction of small bowel and proximal large bowel with transition proximal transverse colon, which the reports indicated features suggestive of intestinal obstruction.

CT Study of abdomen and pelvis with contrast and CT IVP

Pre and post contrast Spiral axial CT study of the Abdomen and Pelvis has performed employing 5- and 3-mm axial scanning. Non-ionic contrast was given intravenously. Oral contrast was also given. Coronal and sagittal reformation performed using MIP.

Findings

1. Liver: Liver shows normal size shape and enhancement without focal lesion. Its surface is regular. The portal vein, hepatic veins and intrahepatic IVC shows normal enhancement. CBD and IHBR not dilated.

2. Gall bladder: Shows normal attenuation and wall thickness. No radio dense calculus is noted.

3. Pancreas: Appears normal in size, shape and attenuation. Peripancreatic fat planes are well maintained. No focal lesion is noted. There is no significant dilatation of the MPD.

4. Spleen: Normal in size shape, attenuation and enhancement.

5. Kidneys: There is extra renal pelvis bilaterally. Both kidneys are normal in size, shape and attenuation and enhancement. There is normal excretion of contrast bilaterally. There is no hydronephrosis or mass lesion.

Both adrenals are normal.

6. Retroperitoneum: Aorta and IVC appear normal in course and calibre.

Visualized bowel loops are normal

No free fluid is noted in the abdomen

Urinary bladder appears normal

Uterus bulky otherwise normal

There is hemorrhage cyst in right ovary measuring 36×32 mm in size. No solid component is seen.

Management

Operative notes

Procedure name: Exploratory laparotomy for intestinal obstruction.

Anesthesia: General anesthesia

Procedure: Decrease ASAP cleaning and draping done. Midline incision from xiphisternum to umbilicus taken. Incision deepened. Peritoneum identified and opened bowel loops were found to be dilated [5]. The bowel loops were followed and narrowed part was identified, band was identified at the location of narrowing at proximally at 2cm from the ileocecal junction. The band was released. Sample from the part was sent for histopathological and microbiological examination. Part of lower distal to the narrowing was cyanosed. The bowel loops were followed and checked till the rectum. The bowel was kept in the warm saline-soaked mops. The cyanosis was observed to be decreased. The bowel was then repositioned Warm saline wash given Haemostasis achieved. Abdomen closed in layers prolene skin closed with etalon 2-0 CB Patient extubated and shifted to ward.

Surgical management

The patient went her surgery ever on 01/06/2021 after consulting responsible physicians. The patient was prepared with antibiotic coverage for intestinal obstruction in hence; further surgeries were carried out on need based. Finally, the patient had exploratory intestinal obstruction for which patient planned for exploratory laparotomy.

Pre-operative

1. Nursing diagnosis: Pain in abdomen related to gross ascites secondary related to lump in the abdomen (Table 1).

2. Nursing diagnosis: Low nutritional pattern less than body requirement related to pain perception secondary related to regurgitation (Table 2).

3. Nursing diagnosis: Fear and anxiety related to hospitalization secondary related to the consequences of surgical procedures (Table 3).

Post-operative

1. Nursing diagnosis: Acute pain in abdomen related to surgical incision secondary related to insertion of pigtail catheter (Table 4).

2. Nursing diagnosis: Risk of infection related to surgical incision and catheter insertion sites secondary related to low immunity (Table 5).

3. Nursing diagnosis: Activity intolerance related to surgical procedure secondary to pain perception (Table 6).

Follow-up care

The patient is advised to visit the hospital on Thursday in case of emergency. She has been prescribed to take:

1. Tablet Pantoprazole 40mg OD 7 days
2. Tablet Emset 40mg OD 7 days
3. Tablet Limes OD 1 month
4. Protein powder 2tbsp TDS

The patient was also advised

1. To take adequate rest to avoid exhaustion.
2. To drink plenty of oral fluids to keep the body hydrated.

Table 1: Pre-Operative stage 1.

| Nursing Interventions | Rationale |
|---|--|
| Assess the level of pain then record and report it to doctor. | To know the level of pain and frame further interventions. |
| Consult and co-ordinate with health care team members of various department included in the case. | To confirm the final diagnosis with staging and prepare nursing diagnosis to provide effective care. |

Table 2: Pre-Operative stage 2.

| Nursing Intervention | Rationale |
|---|---|
| Monitor the weight of the patient daily. | To collect the baseline data about weight loss with the pain perception. |
| Check the physician's order and administer antiemetic and supplementary medicines. | To avoid regurgitation and enhance the health of the patient. |
| Consult the dietician and provide a diet pattern to the patient's family to follow. | To provide the patient with a healthy diet in order to cope up with daily activities. |

Table 3: Pre-Operative stage 3.

| Nursing Intervention | Rationale |
|---|---|
| Maintain rapport with the patient and her family. | To induce comfort so that they can share about the queries and problems. |
| Provide information regarding disease condition and treatment modalities. | To increase knowledge regarding disease condition and treatment modalities of the patient and family. |
| Counsel the patient regarding the mentioned fears and anxiety. | To prepare the patient for the surgery. |

Table 4: Post-Operative stage 4.

| Nursing Intervention | Rational |
|--|---|
| Obtain the level of pain on pain-scale. | To prepare the post-operative nursing intervention on pain. |
| Provide diversional therapy to the patient. | To minimize the level of pain perception. |
| Provide comfortable position to the patient. | To induce comfort and rest. |
| Administer the prescribed medications by the physicians. | To help the patient cure fast and also the reduce pain. |

Table 5: Post-Operative stage 5.

| Nursing Intervention | Rationale |
|---|---|
| Assess the surgical site on every shift further record and report if any pus formation is seen. | To know the wound healing and to check for presence of any infection. |
| Provide Foley's catheter care to the patient. | To prevent urinary tract infection. |
| Check the physician's note and apply new dressing on the sutured site on day 5 and day 8 after the surgery. | To prevent infection on the incision site and promote healing. |

Table 6: Post-Operative stage 6.

| Nursing Intervention | Rationale |
|--|--|
| Encourage the patient to do drink plenty of water. | To hydrate the body of the patient. |
| Advise the patient to perform deep breathing and leg exercises like early walking. | To reduce the risks of blood clots and chest infections. |
| Explain the need of family assisted care to the family members. | To carry out day to day activity and avoid any further injuries. |

3. To eat high iron and fiber rich diet to enhance the hemoglobin level and immunity of the body.

4. To perform deep breathing and leg exercises or early walking as it reduces the risks of blood clots and chest infections.

Discussion

Intestinal obstruction is a significant mechanical impairment or complete arrest of passage of contents through the intestine due to pathology that causes blockage of bowel. The symptoms are including in that pain in lower abdomen, vomiting, constipation [6]. It is confirmed by abdominal x-ray. A treatment of the intestinal obstruction is fluid resuscitation, nasogastric suction or surgery. A complete blood count, renal function and electrolytes, and liver function tests are suggesting as the first laboratory tests. A coagulation profile should be also tested because of the potential need for emergency surgery. In that case surgeons decrease AAp cleaning and draping done. Medline incision from xiphisternum to umbilicus taken. Incision deepened. Peritoneum identified and opened bowel loops were found to be dilated [7]. The bowel loops were followed and narrowed part was identified, band was identified at the location of narrowing at proximally at 2cm from the ileocecal junction. The band was released. Sample from the part was sent for histopathological and microbiological examination. Part of lower distal to the narrowing was cyanosed. The bowel loops were followed and checked till the rectum. The bowel was kept in the warm saline-soaked mops. The cyanosis was observed to be decreased. The bowel was then repositioned warm saline wash given. Haemostasis achieved. Abdomen closed in layers prolene skin closed with etalon 2-0 CB Patient intubated and shifted toward [8]. Studies on gastrointestinal pathologies were reviewed [9-14].

Conclusion

A female patient aged 20 years old from wardha was admitted to surgery ward no- 28. AVBRH on 30 may 2021 with chief complaints of lower abdominal pain, not passes stool and gases, nausea vomiting and fever from 3 days. She is diagnosed as the case of intestinal obstruction through the histopathological report on 30/5/2021. As soon as the patient was admitted to AVBR hospital, all the required investigations were done and appropriate treatments were started. The patient is on symptomatic treatment and underwent surgery as well which is helping

her to relieve the complaints. Since then, she has been admitted for operation. The patient and her family underwent psychological stress, which was solved to an extent by being an active listener and providing proper counselling.

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