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Original Research Paper

General Surgery

A CASE OF SHORT BOWEL SYNDROME DUE TO ABDOMINAL TUBERCULOSIS

Dr Tapsh Thakur Junior Resident(Surgery) Indira Gandhi Medical College and Hospital, Shimla, Himachal Pradesh

Dr Aabha Sharma Medical officer(MS OBG) CH Baijnath, Kangra

Dr Naqsh Thakur Junior Resident(Pathology) Shri B.M Patil Medical College and Hospital and Research Centre, Vijaypura , Karnataka.

ABSTRACT A 33 year old male presented to opd with complaint of pan in whole abdomen for 2 days. He was intravenous drug abuser, chronic smoker and alcoholic. On examination and investigations it was found that he had abdominal tuberculosis with involvement of whole bowel along with perforation and involvement of other organs. Patient underwent Exploratory Laparotomy with Resection of Multiple perforation Bearing Segment of jejunum and Ileum with Exteriorisation of jejunum with Distal mucous fistula with PT/PD done. Our aim with this report is to emphasize the importance of history, early surgical management and prompt abdominal exploration and surgical repair provide good clinical outcome and to review the relevant literature.

KEYWORDS :

CASE PRESENTATION

A 33 year old male presented with history of Pain in Abdomen from past 2 days. H/o Nausea, multiple episodes of Vomiting. H/o Fever, Weight loss, Loss of apetite. H/o Shortness of Breath. Present. No H/o previous Abdominal Surgery and trauma. Patient is intravenous Drug abuser, chronic alcoholic and chronic smoker. No H/o Hypertension, Diabetes mellitus and ATT intake or Thyroid Disorders. On examination Hypotension with Tachycardia was present along with Decreased spO2, Decreased air entry on Right side of chest with bilateral basal crepts present., Tenderness present over whole abdomen, Guarding, Rigidity and Rebound Tenderness present over whole abdomen. No Lump palpable or any organomegaly. On investigations :

- **Blood Investigations:** TLC was raised . Rest all Investigations were within normal limits.

Other blood investigations were WNL.

- **CXR-PA view:** : Multiple cavitatory lesions present in bilateral lung fields with Air under Diaphragm present(Figure 1)
- **USG abdomen :** There was presence of free fluid in Morrison, Right paracolic gutter, RIF with echogenic debris present within it. Pneumoperitoneum present. Presence of omental thickening. Appendix not visualized . f/s/o Perforated Hollow viscus present.
- **CECT abdomen with Chest:**

- Pneumoperitoneum with ascites ? Hollow Viscus Perforation
- Multiple diffusely scattered and centrilobular nodules with multiple cavitatory lesions in bilateral lung fields (Few of them communicating with segmental Bronchi) and surrounding Bronchiectatic changes ? Infective.(Figure 2)

Treatment

Surgery :Exploratory Laparotomy with Resection of Multiple perforation Bearing Segment of jejunum and Ileum with Exteriorisation of jejunum with Distal mucous fistula with PT/PD was done.

Intra Operative Findings : (Figure 3)
On Opening through midline incision,
About 300 cc of biliopurulent fluid aspirated .
Liver was nodular in surface.
Multiple Perforations were present in jejunum,
1st was at about 80cm from DJ Junction : Primary Repair was done.

There were about 25-26 Perforations present in Jejunum and ileum. Ileocecal junction was involved. Perforations were of Variable Size from 1 cm to 4 cm in size.

Appendicectomy was done .Unhealthy segment was resected and Proximal end and Distal end were exteriorised.Multiple enlarged lymph nodes were present in mesentery of size 1cm to 2cm which were sent for biopsy

Sputum sample of Patient was sent which was positive for Tuberculosis and patient was started on ATT.

HPE Reports

- **Resected Segment of Gut :** Histopathological findings are suggestive of Granulomatous inflammation possibility of Tubercular Inflammation is suggested.
- **Appendix :** Histopathological features are suggestive of Granulomatous Appendicitis.
- **Mesenteric Lymph Node :** Showed Granulomas with Central Necrosis : Granulomatous Lymphadenitis.

DISCUSSION

- Short Bowel Syndrome occurs when there is less than 200 cm of small intestine remaining. The minimal length of small intestine necessary to prevent lifelong dependence on parenteral nutrition is approximately 100cm if colon is absent and 60 cm with completely functional colon present.[1]

ETIOLOGIES

Congenital : Intestinal atresia
Acquired : Surgical Resection , Crohn Disease, Necrotising Enterocolitis, Radiation Enteritis, Gangrene due to late presentation of small bowel obstruction, Extensive aganglionosis.[2]

TYPES

JEJUNO-ILEAL ANASTOMOSIS
JEJUNO COLIC ANASTOMOSIS
END JEJUNOSTOMY

Presentation

The hallmark of SBS is severe fluid and nutrient mal-absorption leading to chronic imbalance of protein, carbohydrate, fat electrolyte stores leading to failure to thrive, diarrhea, dehydration, malnutrition and long term dependence on alternate means of nutritional support.

MANAGEMENT

Medical Management [3]:

1. Increased oral intake with small frequent meals
2. Maintain daily calorie requirements and positive fluid balance.
3. Correct Electrolyte and micronutrients imbalance.
4. Adequate fulfillment of Calorie Requirements via parenteral nutrition (TPN).
5. Decreasing acid hyper secretion : PPIs/H2 blockers
6. Decreasing intraluminal fluid load : Octreotide
7. Decreasing symptoms associated like Diarrhoea : Loperamide and decreasing small bowel bacterial overgrowth : Metronidazole.

SURGICAL MANAGEMENT

Autogenous Intestinal Reconstruction surgery :

Primary objective is to improve intestinal function, optimise bowel motility and increase mucosal absorptive surface area.

1. Stricturoplasty, Lysis of Adhesions and Segmental Resection only if needed.
2. Stoma takedown and reestablishing intestinal continuity.
3. Procedures to prolong transit or Improve motility :
   Reversal of Intestinal Segment : 10cm in adults and 3 cm for children.
   Colonic interposition : 8-24 cm
   Intestinal Tapering and plication
4. Procedures to increase Absorption : [4]
   Longitudnal intestinal lengthening and tailoring (LILT) / Bianchi Procedure
   STEP : Serial Transverse Enteroplasty.[5]
   Spiral Intestinal Lengthening and Tailoring
4. Transplantation : can be single or combined (including liver)

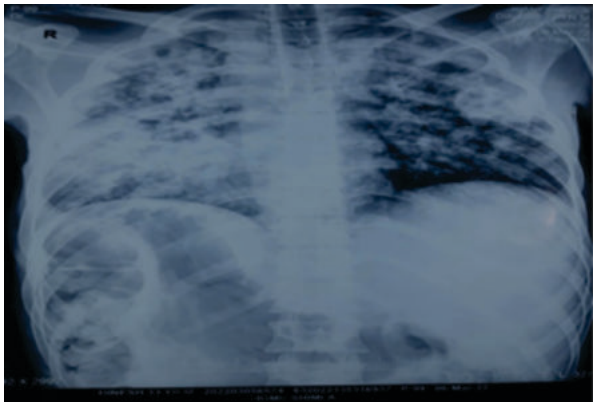

Figure 1

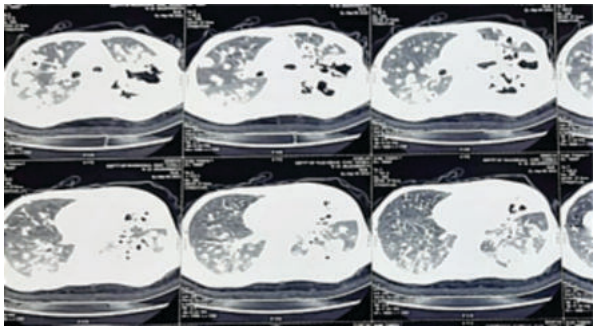

Figure 2

Figure 3

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