ORIGINAL RESEARCH PAPER

General Surgery

CASE OF DUODENAL FISTULA WITH DELAYED HEALING IN PATIENT WITH TUBERCULOSIS AFTER BLUNT ABDOMINAL TRAUMA

KEY WORDS: Tuberculosis, Duodenal fistula, blunt abdominal trauma, enterocutaneous fistula

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ABSTRACT

Tuberculosis has estimated case of 99,00,000 worldwide and 25,90,000 in india. Deaths due to tuberculosis is 12,80,000 worldwide and 4,93,000 in india.1 Abdominal TB constitutes 12% of all extrapulmonary tuberculosis cases and is one of the most common forms of extrapulmonary TB.2 Duodenal perforation following blunt abdominal trauma is an extremely rare and often overlooked injury leading to increased mortality and morbidity.4,5,6 34 year old male patient presented with complaint of abdominal pain with rigid abdomen and CECT abdomen and pelvis showed retropneumoperitoneum with pneumoperitoneum. Emergency exploratory laparotomy done and duodenal perforation of size 3*3 cm2 size repaired with retrograde duodenostomy and feeding jejunostomy. Duodenal perforation leaked after 3 days and persistent bilious drain output from right side of drain kept in morrison pouch. Difficulty in treatment was maintaining nutrition, hydration and treatment of tuberculosis with duration of 44 days and readmitted for enterocutaneous fistula with significant weight loss for duration of 1 month.

INTRODUCTION

Tuberculosis has estimated case of 99,00,000 worldwide and 25,90,000 in india. Deaths due to tuberculosis is 12,80,000 worldwide and 4,93,000 in india.[1] Abdominal TB constitutes 12% of all extrapulmonary tuberculosis cases and is one of the most common forms of extrapulmonary TB.[2] Early diagnosis and management is required to prevent high morbidity and mortality associated with duodenal perforation after blunt abdominal injuries.[11] In case of penetrating trauma or hemodynamic instable patients following blunt trauma the emergent laparotomy is mandatory. CT scan is recommended in cases of hemodynamic stable patients after blunt trauma.[12] Complications after duodenal perforation surgery like duodenal fistula, peritonitis, and paralytic ileus, and patient's death within 10 days of surgery were noted.[9,10]Defaulter cases of tuberculosis is due to lost to follow up and compliance and adherence to anti-tubercular treatment (ATT). This case was defaulter due to non-adherence to treatment due to social and psychological stigma. This resulted in anastomotic leak from duodenal perforation and difficult in maintaining nutritional status due to leak and active tuberculosis disease.

CASE REPORT

34 year old male patient presented with severe abdominal pain with rigid abdomen following blunt abdominal trauma. CECT abdomen and pelvis showed pneumoperitoneum with retropneumoperitoneum with collection of 45 cc near duodenal D2 segment. Patient was taken for emergency exploratory laparotomy. Intraoperative findings suggestive of duodenal perforation of size of 3*3 cm2 sized found which was repaired using vicryl 3-0 in intermittent manner and omentopexy was done using silk 2-0. Retrograde duodenostomy and feeding jejunostomy done. Other intra-operative findings were normal. Patient was diagnosed with tuberculosis on sputum ZN stain microscopy and started on injectable second line Anti-tubercular treatment. On pos-operative day-3, Anastomotic leak in the form of increased bilious drain output from right sided drain kept in morrison's pouch. Daily output from right drain was 200-300 cc bilious output. Drain output was decreased slowly and drain removed on postoperative day-22 with minimal output. Daily output from retrograde duodenostomy was also 100-300 cc varied daily with as high as 600 cc bilious output and after 12 days, refeeding of bile was done from feeding jejunostomy.

Patient's nutritional status was maintained using total parenteral nutrition for first 12 days starting from 3rd post-operative day. Then feeding from jejunostomy and parenteral nutrition supplement was given to maintain optimum nutritional status of patient. Patient was started on injectable ATT which was gradually shifted for tablet form of ATT given through feeding jejunostomy for last 5 days and was discharged on patient's request on post-operative day 44.

Patient again presented with significant weight loss, dehydration and enterocutaneous fistula after 1 week. Patient was readmitted and parenteral nutrition was started. CECT abdomen and pelvis showed proximal jejunal enterocutaneous fistula. Reason for enterocutaneous fistula was suspected to have decreased bioavailability due to feeding through jejunostomy bypassing stomach. So full oral ATT was started and patient improved after starting full oral ATT. Report for resistant tuberculosis was negative.

Patient was discharged with clinically stable condition, weight gain, controlled enterocutaneous fistula with minimal daily output.

DISCUSSION

Post-operative complications are more in active tubercular infection. Total parenteral nutrition have significant complications like electrolyte imbalance and central venous catheter induced septicaemia which may need broad spectrum higher antibiotics and daily titration of IV fluids, but it is good as supportive treatment. Patient improved after second-line injectable ATT but was deteriorated after starting tablet form ATT through feeding jejunostomy. Patient again improved after full oral tablet form ATT. Bioavailability is significant problem in case of non-availability of absorptive surface of stomach like gastrectomy and feeding jejunostomy. Multiple studies support that Patients who have undergone gastric resection are considered at increased risk of developing tuberculosis; and such patients, if tuberculin-positive, are recommended for preventive therapy with isoniazid, regardless of their age.[6,7,8] Patient's enterocutaneous fistula was treated conservatively as low-output fistula and it is

in healing phase.

CONCLUSION

Tuberculosis is major problem worldwide, especially in india. Defaulter in ATT in this case resulted in active tuberculous infection which resulted in complications. Complications after laparotomy is significant and treatment of complications as well as treatment of tuberculosis is difficult. Bioavailability of drugs, especially isoniazid, of ATT is problem where stomach is bypassed like gastrectomy or feeding jejunostomy. Though tuberculosis is treated, it is associated with significant morbidity, as in this case was observed as very low-output fistula and it is on healing phase.

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