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RESEARCH ARTICLE

A CASE REPORT OF CHYLOUS ASCITES AND TRANSIENT MIDGUT VOLVULUS THROUGH PETERSEN'S DEFECT THREE YEARS POST ONE-ANASTOMOSIS GASTRIC BYPASS-MINIGASTRIC BYPASS

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Abstract

One-anastomosis gastric bypass- Minigastric bypass (OAGB-MGB) is an emerging bariatric surgery technique replacing the RYGP with reasonable short- and long-term side effects. Here we would like to present a late complication of OAGB-MGB associated with signs of peritoneal irritation and severe pain due to transient midgut volvulus associated with chylous ascites. We observed peritoneal lymphatic collection in association with features suggestive for small bowel obstruction 3 years following OAGB-MGB. So, we believe that such complication should be considered as a potential side effect during short and long term follow up after gastric bypass. A strong recommendation should be provided.

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Introduction:-

A female of 48 years, presented with vague generalized abdominal pain associated with excessive vomiting and constipation 6 hours after taking her breakfast with short period of colicky periumbilical abdominal pain.

The patient reported abdominal distention with constipation after the onset of the pain with change of her habitual bowel motions she used to have before. There was no fever initially, but developed low grade fever before shifting to operation room.

Past surgical history revealed history of tubal ligation, then gastric banding, then OAGB-MGB 3 years back to control her body weight and comorbidities in the form of uncontrolled type 2 diabetes and hyperlipidemia and hypertension. Her long-term weight loss was adequate finally. Her pain score was 7/10, she was pale but hemodynamically stable. She had slightly distended abdomen with guarding and rebound tenderness especially in the periumbilical area but not rigid with audible bowel sounds. Initial emergency evaluation at the time of presentation revealed raised WBCs from 11.6 to 17.6 10^3 /ul within few hours, her HB was 7.8g/dL, normal liver and kidney function. Serum NA was 134 mmol/l, serum K was 3.1 mmol/l.

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After initial resuscitation, CT abdomen with contrast was planned which reported small bowel obstruction (dilated loops, rotation of mesenteric vessels, herniating middle distal ileal loops).? swirl sign (Figure 1), and moderate amount of peritoneal fluid (Figure 2).

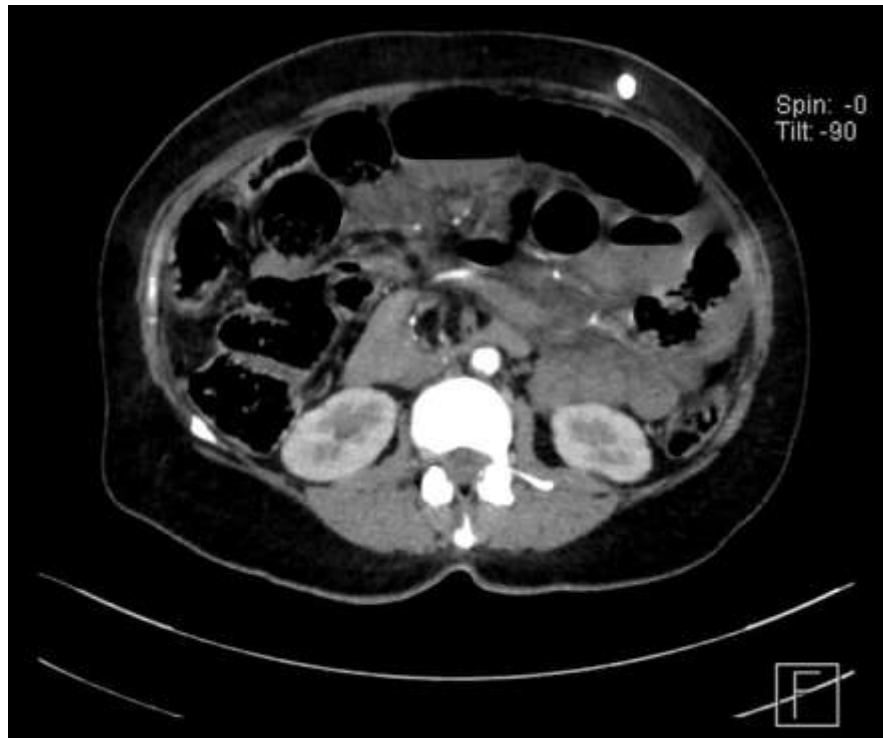


Figure 1:- Swirl sign, bowel dilatation.

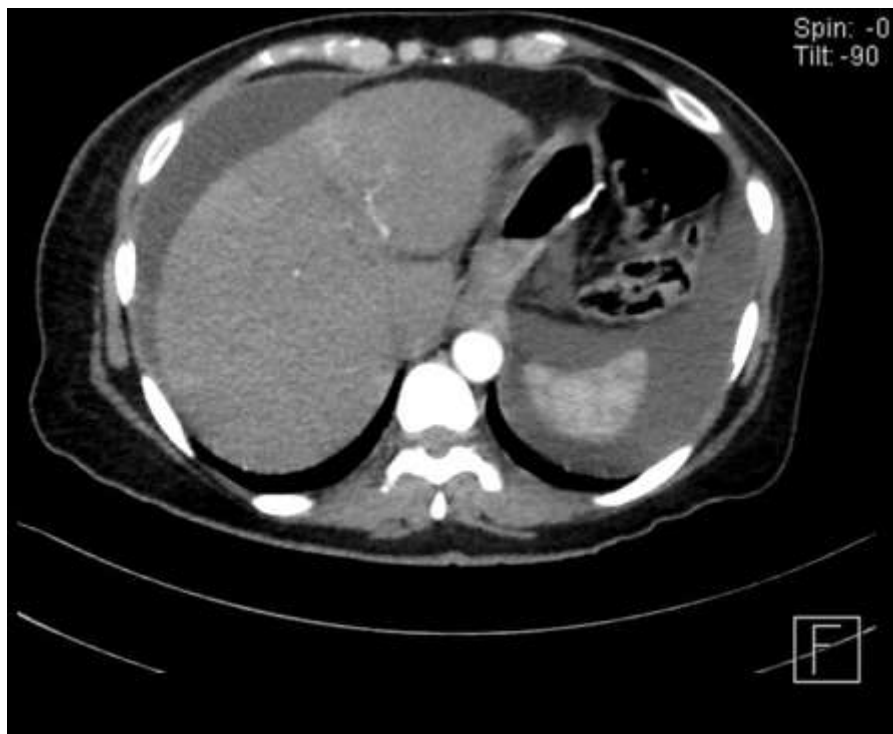


Figure 2:- Large amount of intraabdominal fluid.

A diagnostic laparoscopy was urgently performed. Intraoperatively, we found large amount of milky secretion in the Morison pouch, pelvis and among the bowel loops (Figure 3). No signs of bowel ischemia or signs of small bowel obstruction was appreciated. The gastrojejunostomyanastomosis(GJA) looks healthy with no leak or signs of inflammation could be seen. Little hyperemia at the GJA is hardly appreciated. We continue for formal exploration starting from the duodenojejunal junction (DJ) proximally to the ileocecal junction to ensure normally oriented bowel loops. Inspection of the colon and the pelvic organs were also normal. Metallic clip for left sided tubal ligation was appreciated and reported. Three separate stitches using Vicryl 3/0 was inserted between the ascending loop mesentery to the posterior abdominal wall and the transverse mesocolon was done to anchor the bowel loop from getting rotated once again. Suction of collection, irrigation with saline and insertion of drain in the pelvis. Post-operative course was uneventful and drain was removed after 3 days. Findings are going with post bariatric surgery chylous ascites with transient midgut volvulus.



Figure 3:- Chylous ascites.

Discussion:-

Small bowel obstruction is a well-known complication post gastric bypass with over all incidence of 4.4%⁽¹⁾. The causes of small bowel obstruction was appreciated according to the onset of the presentation into an early reported causes as well as a late ones. Early small bowel obstructions tend to result from technical problems with the Roux limb and require revision of the bypass or small bowel resection significantly more often than late obstructions. The latter factors of obstructions usually result from adhesions or hernias, which could be handled laparoscopically without bowel resection⁽²⁾.

Reported cases of intestinal herniation after OAGB-MGB seems to be limited in comparison to RYGBP. The most common site for internal hernia to occur is the Petersen's space^(3,4). a consensus statement of experts on OAGB-MGB, agreed that routine closure of the Petersen's space should not be done^(3, 5). However, emerging reports of hernia after OAGB-MGB, have led to change of the opinions of some experts⁽⁶⁾. Closure of the mesenteric defect at the time of the primary surgery has been shown to reduce the occurrence of internal hernia following RYGBP^(7,8)

Once an internal hernia developed, chylous ascites can be an associated problem generally caused by a loop passing through the Petersen's defect, which causes direct compression of the mesenteric vessels and fluid

extravasation⁽³⁾. Twisted bowel due to herniation of part of the alimentary limb behind the biliopancreatic limb causing extravasation of lymph in our case which was transient with spontaneous reduction at the time of intervention because of the patulous defect behind the GJA. We detected the affiliated segment close to the defect but not passing through it. However, in previous reports, that was resolved by the release of the internal hernia⁽⁹⁾.

To date, internal hernias as the origin of chylous ascites is a rare and unusual complication of RYGBP. The percentage of association that exists between the internal hernia and chylous ascites is unknown^(10,11). To the best of our knowledge, this is the second report of chylous ascites after OAGB-MGB⁽³⁾.

Conclusion:-

Chylous ascites post OAGB-MGB is extremely rare in reflection of the rare incidence of internal herniation after OAGB-MGB in comparison to RYGBP. Surgical intervention is required relieve the compression of the lymphatic vessels. Closure of the potential spaces that can lead to internal herniation should be evaluated and warranted.

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