A case of Gastric Sleeve stricture resistant to endoscopic dilatation

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Abstract—Obesity is becoming an increasingly common disease across the world. Various restrictive and malabsorptive surgical procedures have been developed to tackle morbid obesity. These procedures though efficient in causing weight loss and decrease in co – morbidities present with their own unique complications. Sleeve gastrectomy is one of the more recent, mainly restrictive procedure which has been gaining rapid popularity. Stricture of the gastric sleeve pouch is a rare and distressing complication of this procedure. Here we present a case of a 44-year-old woman who underwent Sleeve gastrectomy in Gulf 5 years back. She developed a stricture of the sleeve pouch for which she underwent two endoscopic dilatations which did not provide much relief. She was finally treated with a Roux – en – y gastro-jejunostomy which finally improved her symptoms.

Index Terms—Laparoscopic Sleeve Gastrectomy, Sleeve Stricture, Roux-En-Y Gastric Bypass.

I. INTRODUCTION

Obesity has become a common disease affecting people of both genders and all ages¹. It's prevalence in females of Gulf countries ranges from 3 – 18 %². Amongst all the surgical procedures for morbid obesity, Sleeve Gastrectomy has become very popular accounting for more than one third of all bariatric surgeries done worldwide³. This may be due the fact that sleeve gastrectomy is considered to be technically easier and safer than other bariatric surgeries⁴.

Stricture of the sleeve pouch have remained one of the distressing complication of this procedure whose ideal treatment is not yet standardised⁵. There are various endoscopic and surgical options to Sleeve stricture with varying rates of success⁶.

Here we present a case of a 44-year-old woman who underwent Laparoscopic sleeve gastrectomy in Gulf 5 years ago. She developed progressive dysphagia over time and was diagnosed with a sleeve stricture. She had undergone two endoscopic dilatations for same which failed to provide any relief. She finally underwent a revision surgery where we converted the sleeve to a Roux – en – Y gastric bypass. Patient's progress post the revision surgery was satisfactory.

II. CASE REPORT

A 44-year-old female patient presented with history of progressive weight loss, intolerance to food and

regurgitation following laparoscopic sleeve gastrectomy 5 years back. Her weight before the procedure was 128 kgs which had reduced to 28 kgs when she presented to us (Fig 1 & 2).

Fig 1 – Patient before she underwent Sleeve Gastrectomy (weight-128 Kgs)

Fig 2 – Patient when she presented to us (weight – 28 kgs)

She underwent a barium swallow study 6 months after the surgery on which she was diagnosed with a stricture in the mid body region of sleeve (Fig 3).

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Fig 3 – Barium study showing sleeve stricture in mid body region

She underwent endoscopic dilatation twice, which provided temporary relief but her symptoms continued to worsen over time. She started losing her teeth, her hairs thinned out and her nails became brittle.

When she presented to us, her haematological workup revealed severe hypoalbuminemia. A decision was made to first perform a feeding jejunostomy to correct malnutrition before definitive revision surgery.

Post feeding jejunostomy and high protein high calorie diet, in one month her general condition and albumin levels improved.

Laparoscopic Roux-en-y gastric bypass was done with gastro-jejunostomy done at 50 cms from duodeno-jejunal junction (Fig 4).

Fig 4 – Intra-operative picture showing sleeve stricture (white fibrous band)

Her recovery was uneventful and she was discharged on second post-operative day. On one month follow up she had gained 15 kgs of weight and was able to accept normal oral diet (Fig 5).

Fig 5 – Patient one month after revision surgery

III. DISCUSSION

Stricture of sleeve pouch is an uncommon complication of sleeve gastrectomy procedure⁷. It's incidence ranges from 0.1-3.9 %³. These may present early within a month of a surgery or after that when these are called as late strictures⁸. Though it's not possible to point a specific cause for strictures, early strictures may be due to post-operative hematomas or oedema⁷. Late strictures are mostly due to surgical causes like excessive retraction, ischaemia or direction of staple line⁸. Patients present with complaints of dysphagia, vomiting, regurgitation and progressive weight loss⁷. In severe cases like the present one chronic malnutrition may also present with thinning of hair, loss of teeth and brittle nails.

Though most studies have identified Incisura of stomach as the most common site of sleeve stricture¹⁰, one study found “mid-body of sleeve” as site in more than half of all cases of stricture⁷.

Most of the early strictures can be managed conservatively with bowel rest and hydration. If there is no associated complication like abscess, they mostly resolve spontaneously¹¹. Late strictures require intervention. Endoscopic dilatation and use of stents are tried to manage these and are successful in most cases¹².

In rare cases where endoscopic intervention fails such cases require revision surgery like conversion to Roux – en – y gastric bypass as in this case or gastro-gastrostomy where feasible. Surgical procedure depends on surgeon's expertise and judgement and there are no standard guidelines for management of sleeve strictures which do not resolve by endoscopic intervention¹².

IV. CONCLUSION

Sleeve stricture is a rare but troubling complication of sleeve gastrectomy whose early detection and optimal management can provide relief to patient. Endoscopic dilatation is usually effective but proper guidelines for treatment of cases refractory to endoscopic dilatation are not there. More such cases need to be studied to devise ideal protocols for its management.

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