

# Euro Case Reports 2020: Necrotizing enterocolitis in a patient post RouxEn-Y Gastric Bypass - Benjamin Schapira - University College London

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## ABSTRACT

Necrotizing enterocolitis (NEC) carries one of the highest mortality rates of all gastrointestinal disorders. Both its pathogenesis and aetiology remain enigmatic in adult patients. We report on the first known case of NEC following Roux-en-Y Gastric Bypass (RYGB) long-term. A 42-year-old female patient (BMI 51.2) underwent RYGB. At 12 months follow-up she presented with diarrhoea, vomiting, tachypnoea and hypotension. She was severely acidotic (pH 6.9), white cell count (24x10<sup>9</sup>/L) and lactate (7.3U/L). CT presented dilated bowel most prominently at the upper jejunum and she subsequently underwent laparotomy for small-bowel resection, subtotal colectomy and end ileostomy. Intraoperative, patchy necrotic segments of colon were noted. Postoperatively, her lactate increased to 10U/L, necessitating relook laparotomy for further bowel resection. Caecal and ascending colon samples showed ischaemic and necrotic areas with transmural inflammation and marked bacterial overgrowth with no evidence of vascular compromise. These features resembled acute NEC. Clostridium, Campylobacter, Salmonella, Shigella and vasculitis screening were negative. She had a slow recovery, requiring total parenteral nutrition and at 36 months follow-up she is making good progress. We believe an episode of binge eating led to gastrointestinal dilatation as seen in anorexia nervosa following rapid diet change. Such dilatation would diminish blood flow and damage mucosal integrity through ischaemia, permitting invasion of pathogenic gasforming bacteria. With no specific diagnostic criteria; delayed diagnosis, time to surgery and failure to resect all necrotic tissue exemplify the challenges in management. We believe it's important to highlight this case to raise awareness of similar presentations in post-bariatric surgery patients.

**Keywords:** Post Roux-En-Y; Diarrhoea; Vomiting; Hypertension

## INTRODUCTION

Laparoscopic Roux-in Y gastric bypass (LRYGB) is currently one among the surgical options to treat morbid obesity. The occlusive post-LRYGB difficulties mostly appear as fibrous membranes of wounds, intussusception or internal hernias. Intussusception after a bariatric surgery occurs in 0.1- 0.3% of the cases and within the post-LRYGB OSBs (Obstruction of the tiny bowel), intestinal intussusception represents between 1 and 5%. A bibliographical revision was made using PubMed [laparoscopic Roux-en-Y gastric bypass AND Intussusception AND Pregnancy]. Five indexed works were found with six patients. A 42-year-old female patient (BMI 51.2) underwent RYGB. At 12 months follow-up she presented with diarrhoea, vomiting, tachypnoea and hypotension. She was severely acidotic (pH 6.9), white cell

count (24x10<sup>9</sup>/L) and lactate (7.3U/L). We made a bibliographical revision of the present available literature.

## CASE REPORT

A 42-year-old female patient (BMI 51.2) underwent RYGB. At 12 months follow-up she presented with diarrhoea, vomiting, tachypnoea and hypotension, hypertensive diabetic and dyslipidemic with a history of LRYGB with cholecystectomy associated to said procedure in 2011 in additional medical facility. She received the ER of our hospital, after having been admitted in several institutions, saying that seven days ago she had started affected by abdominal pain, muscle strain, nausea, bile-stained vomiting, negative catharsis and impossibility to release gases since the symptoms had started.

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During her previous hospitalization within the other facility, an upper gastrointestinal video endoscopy had been done where stenosis of the gastroyeyunostomy was discarded. She had tachycardia because the only positive sign from the physical exam. Fetal vitality was confirmed via positive fetal heart beats (FCF: 147 beats per minute). A nasogastric tube was inserted with a 400 ml bilious charge. In the multi detector computerized tomography, evidence was seen on the left side of a picture compatible with jejuno-jejunal invagination and an aerial image in halo that would correspond to pneumatosis of the invaginated loop. Later, we identified the non-dilated loop (fine loop) at the extent of the valve and that we explored the tiny bowel from distal to proximal to the foot of the Roux-in Y where no adherences involving this were seen. At 10 cm from the foot of the Roux-in-Y, we observed a retrograded intussuscepted jejunal segment, which had an intestinal perforation of 1 centimeter in diameter contained by the intussuscepted block.

## DISCUSSION

LRYGB is currently one among the surgical options to treat morbid obesity. The occlusive post-RYGB obstacles mainly seem as fibrous membranes of wounds, internal hernias or intussusception. OSB after LRYGB arises with an occurrence of 0.2-4.5% years or months later surgery. Among the OSBs, internal hernias represent the foremost common cause. Pregnant patients constitute a special sub-population. Obese patients who wish to urge pregnant, apart from

the main reduction in post-surgical weight, and therefore the resulting clinical improvements, improve their fertility. Hyperemesis, nausea, reflux, the feeling of feeling full are frequent symptoms within the trimester of the pregnancy. During a 30-week, pregnant patient with bile-stained vomiting with a history of LRYGB, an OSB must be suspected. The median manifestation time post-RYGB was four years [r 1- 10] and therefore the mean fetal age was 27.42 weeks [r 17-34]. In terms of the indicators, seven patients (including our case) offered five acute, intermittent abdominal pain and two with several days in development. All of them had nausea. The delays in surgical involvement in OSB can proliferation the fetal maternal morbimortality. Surgery within 48 hours of the clinical picture has 10% mortality, while after 48 hours of the diagnosis, the mortality rises to 50%. Just one death has been reported thanks to NEC (NEC) associated to maternal pneumonia. The surgery alternatives consist within the reduction, reduction plus resection or IR (intestinal resection) plus EEA0. In our case, the IR plus EEA decision was made due to the necrosis of the intussuscepted block.

## CONCLUSION

With no specific diagnostic criteria; delayed diagnosis, time to surgery and failure to resect all necrotic tissue exemplify the challenges in management. We believe it's important to highlight this case to raise awareness of similar presentations in post-bariatric surgery patients.