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# Acute Massive Gastric Dilatation Complicated with Infarction and Perforation:A Case Report

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**Abstract:** Acute massive gastric dilatation complicated with infarction and perforation is a rare and serious surgical problem having high mortality (>80%). But in time diagnosis and proper surgical approach may be awarded with encouraging result. A young lady of 22 was admitted in USTC, September 2006, as acute abdomen with shock. Acute massive gastric dilatation with infarction mostly along its greater curvature and a huge perforation at the center of infarct area was detected. Moderate pyloric stenosis was also detected during operation. After proper resuscitation laparatomy was done. Infarct portion was resected and gastrojejunostomy done to ensure better drainage of gastric content. In early post- operative period a small left subphrenic abscess formed that was cured by incision and drainage. Other complications, like: wound infection, thrombophlebitis at I.V infusion site, small right plural effusion was managed by antibiotic and thereafter the patient recovered. Follow-up was done on regular intervals for one year. There were complaints of tachycardia, occasional bile vomiting and early satiety after meal. She was advised to take small and frequent dry meals, to avoid carbohydrate rich fluids and to take rest lying down for a while after each meal. This relieved her symptoms remarkably within months. Oesophago-gastroduodenoscopy (OGD) and Ba-meal follow through X-ray of gut was done at eight months after operation. OGD revealed mild oesophagitis and moderate pyloric stenosis. Ba-meal follow- through X-ray showed good passage of contrast medium through the anastomosis. At one year she gained three Kg weight but had complaints of occasional small bile vomiting. Aetiology and pathogenesis of acute massive gastric dilation and perforation is debatable. Operative procedures like: total gastrectomy with oesephago-jejunostomy after Roux-en-Y is often recommended. In this case, big meals in presence of pyloric stenosis are considered the aetiolocal factors. The mentioned procedure was considered appropriate as because: a considerable portion of stomach was found healthy, the aetiology was treated, procedure was minimum but effective and less time consuming, which was so important as the patient was in critical condition.

**Keywords:** Acute massive gastric dilatation, infarction, Perforation and Recovery.

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**Introduction**

Acute massive gastric dilatation is an uncommon surgical condition exact aetiology and pathogenesis of which is still debatable. SMA syndrome, binge eating episode, post-operative atony, pyloric stenosis etc are regarded as important predisposing factors.[1] Infarction and perforation of stomach are serious complications that may lead to fatal outcome. But in time diagnosis and proper surgical intervention may save the life of the patient. An example of such a case is presented here.

**Case Report**

A female patient of 22 from Rangunia, Chittagong, who was suffering from peptic ulcer disease for long years was admitted in USTC, BBMH in January 2006 with complains of acute pain and distention of abdomen after a heavy meal. At home she tried to get relief by self-induced vomiting but pain and distention of abdomen rapidly increased. Pain started initially in the epigastrium and rapidly spreaded to whole abdomen but not radiated to back. On admission pulse was 120/m, B.P.80/70 mm of Hg. Tongue was dry and respiration was hurried. Anaemia, jaundice was absent. Plain X-ray showed hugely dilated stomach (fig.-1).

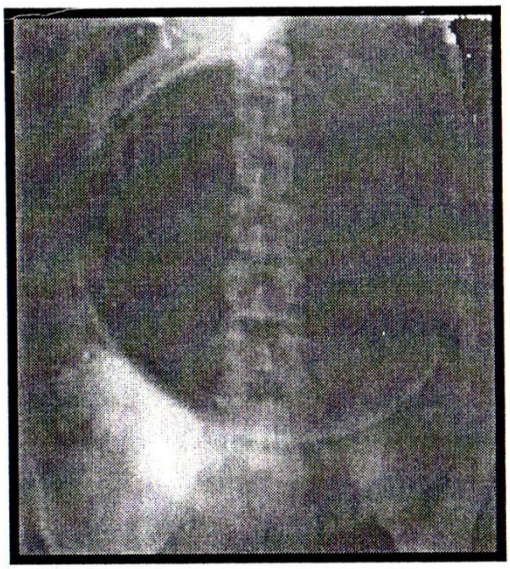


**Figure 1**

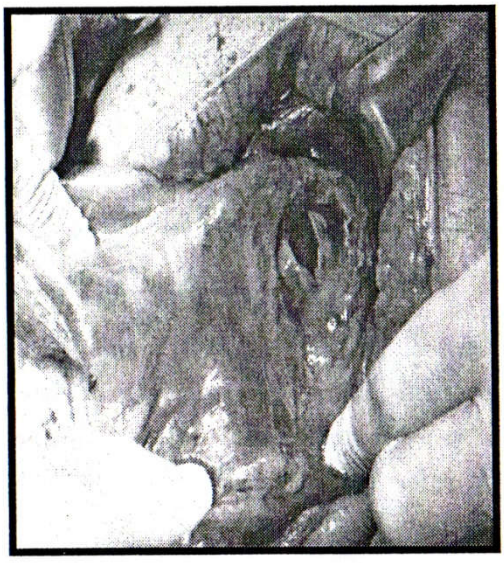


**Figure 2**

Patient's condition rapidly deteriorated. Pulse rate increased and became feeble, B.P. was almost unrecordable.

Decompression of the stomach was tried with nasogastric suction. Shock state was corrected a little with I.V. fluids and electrolytes disbalance was corrected. Sign of peritonitis developed. Plain X-ray showed pnumoepritonium. Laparatomy was done on emergency basis. Abdomen contained huge quantity of sero- purulent fluid mixed with food particles. Stomach was hugely dilated but almost empty. Almost half of it along the greater curvature starting from lower part of fundus up to proximal part of antrum was found necrosed. There was a big perforation at mid infarct area anteriorly. A considerable portion of the stomach mostly along the lesser curvature was healthy (fig-2). Abdominal portion of the esophagus looked also healthy. There was prolapses of oedematous mucosa into the lumen of antrum and moderate pyloric stenosis was also detected. Infarct portion was excised. Continuity of the gut is maintained by gastrojejunostomy to ensure better drainage from the stomach (fig-3, 4.)

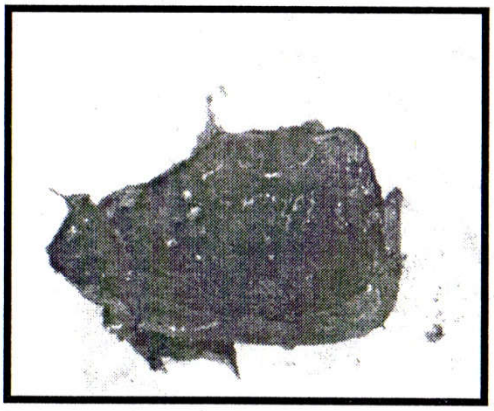


**Figure 3**

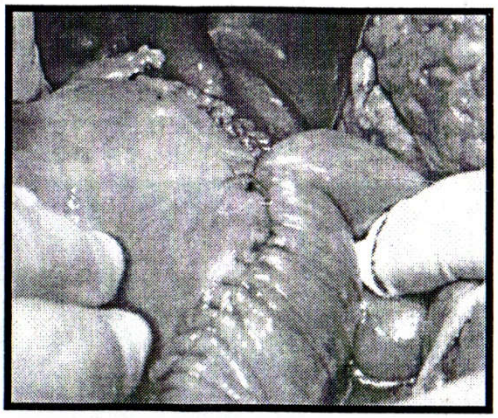
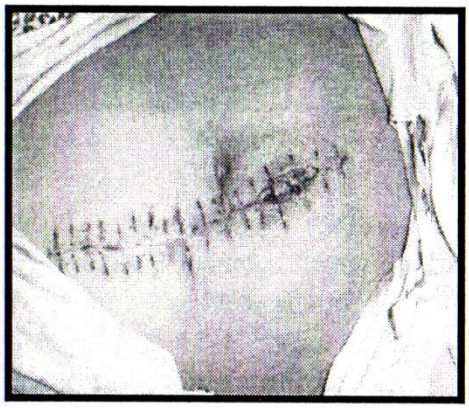


**Figure 4**

Postoperative period was complicated with small left subphrenic abscess, which was cured by left sub-costal drainage and administration of proper antibiotics. Wound infection and thomboplhebitis at the site of IV infusion site was (Fig- 5,6,7,) cured by antibiotics. Follow-up is done on regular intervals for one year. Patient complained of early satiety, palpitation and occasional bile vomiting after meals in first few months. She was advised to take small frequent dry meals and to avoid fluids

rich in carbohydrate. This relieved her trouble to a remarkable extent with in months. At eight months Ba-meal follow- through X-ray of G.I. tract and oesophagogastroduodenoscopy (OGD) was done. Ba- meal follow X-ray showed small tubular stomach with good passage of contrast through the anastomosis and very small evacuation through gastric outlet (Fig-8). OGD showed mild oesophagitis and moderate pyloric stenosis. She felt herself healthy except some trouble due to occasional bile vomiting. She gained three Kg wt at one year (Fig- 9,10)



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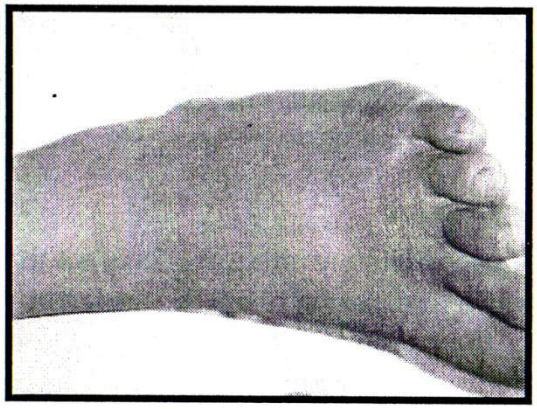
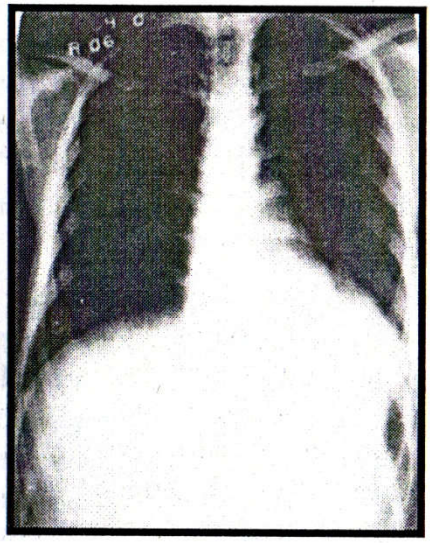
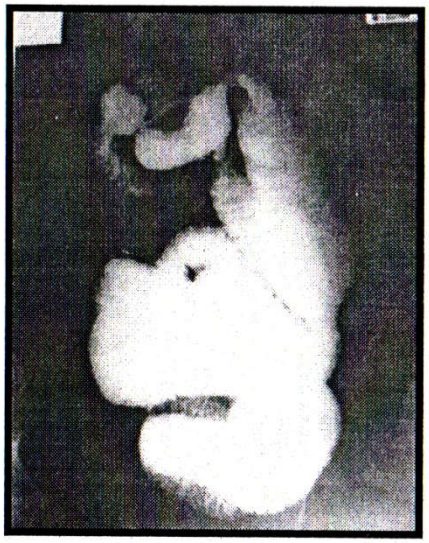


**Figure 6**





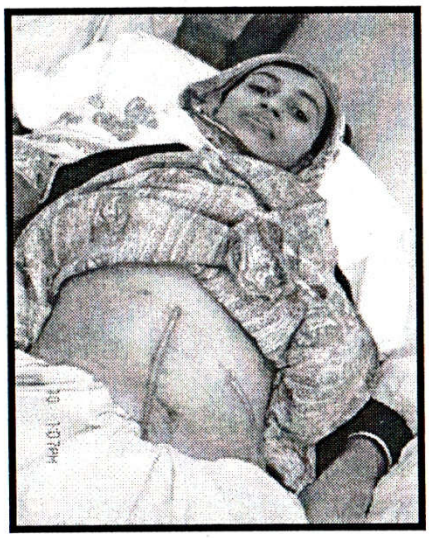


Figure 9

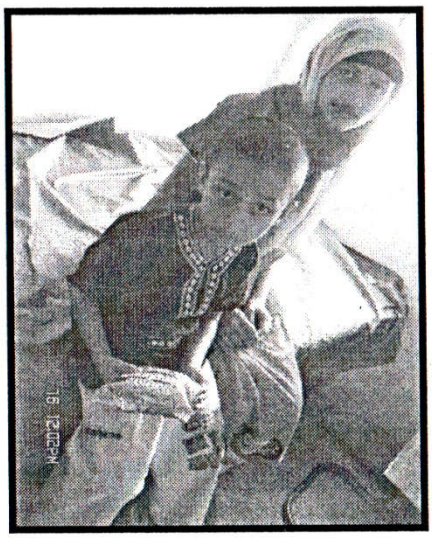


Figure 10

## Discussion

Acute dilatation of stomach is a rare occurrence in surgical practice. It was first described by S.E. Duplay in 1933.[1,2] Various factors are described in the pathogenesis of this problem which includes SMA syndrome, atony of stomach after operation, excessive eating, pyloroduodenal disorders, abnormal gastric homeostasis on a genetic basis following trauma etc.[3] But none of them is free from controversy. Diagnosis of this problem is based on clinical suspicion and specific radiological and imaging evidences. Acute pancreatitis, acute cholecystitis, volvulus of stomach, peptic ulcer perforation are some important differential diagnosis which should be excluded by necessary measures. Estimation of serum amylase, CT of abdomen and oesophagogastroscopy after decompression of the stomach helps to establish the diagnosis[4]. Prompt diagnosis is very important, otherwise infarction and perforation occurs. Mortality at this stage is very high (80%)[5,6].

After proper fluid and electrolytes correction emergency laparotomy is essential.[7, 8]. To asses the extent of resection and maintenance of gut continuity peroperative oesophagoscopy is of great value especially when anastomosis is done with oesophagus. Verities of surgical procedures are described in the literature. Total gastrectomy and oesephago-jejunostomy after Roux-en-Y is the commonest procedure mentioned in the literature[3, 9, 10, 11].We perform resection of infarct portion and perfomed gastro-jejunostomy considering the serious condition of

the patient and suspected aetiology, pyloric stenosis. Intensive postoperative care is essential to get good result. Post operative pneumonia, subphrenic abscess, wound infection are common complications that are also encountered in our case that are managed by appropriate measures.

## Conclusion

Acute massive gastric dilatation is occasionally reported since the beginning of nineteenth century. But exact aetiology and pathogenesis is still debatable. Early diagnosis and treatment is essential to prevent complications like: infarction and perforation where mortality is very high. If related with pyloric stenosis and where partial infarction and perforation of stomach occurs, patient's condition is critical a well-judged resection of stomach with ante- colic gastrojejunostomy may be considered as an effective procedure. We recommend proper clinical approach and early investigation like plain X-ray abdomen and if needed gastroscopy to diagnose the case early. Good preoperative resuscitation is rewarded.

## Acknowledgements

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