

Volvulus of the Stomach Through a Hiatus Hernia

A Case Report

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THIS 55-year-old white female was admitted to Riverside Community Hospital at 10 p.m. on 12/21/62. with the complaint of vomiting coffee ground material, melena and dizziness for three days. Burning epigastric pain was present without radiation and which was relieved by antacids. The patient stated that six months prior to this admission she had in New York City an upper gastro-intestinal series done which was reported as negative.

This patient was in route from New York to California when she was involved in an automobile accident. She stated that she hit her anterior chest on the dashboard but obtained no other injuries.

Past history revealed the following: this patient had been addicted to pantapone and was allergic to demerol. A cholecystectomy was performed in 1937. Anterior colporrhaphy was done in 1938. In 1948 this patient had a trans-abdominal repair of a hiatus hernia. The patient reported that this latter procedure was complicated by hypotension and later followed by a left phrenic nerve crush. This patient later had an appendectomy, total hysterectomy and two exploratory laparotomies for small bowel obstruction. There was a history of myocardial infarction in 1951 and a perforated nasal septum and fractured left clavicle. There was a history of lues. There was no important familial history.

The physical examination revealed a slender pale white female with dyspnea. The anterior nasal septum was perforated and was deviated markedly towards the left. The heart and lungs did not reveal any abnormalities. There were numerous surgical abdominal scars. There was tenderness in the right upper quadrant and epigastrium. The bowel sounds were normal. There was no rebound tenderness or distension. Rectal examination revealed black tarry stools. Neurological examination was not revealing. There were bilateral varicose veins of the lower extremities.

A Levin tube was passed on admission and revealed coffee ground material. Emergency laboratory findings revealed the following: Hemoglobin 5.0 Gms., hematocrit 23%, BSP 1.5%, blood ammonia 1.3 micrograms. Whole blood transfusion was started. Twelve hours after admission an emergency gastrointestinal series revealed a volvulus of the stomach through the esophageal hiatus into the right thorax. This patient was scheduled for surgery after transfusion with four units of blood.

A ventral incision was made from the xiphoid process to the umbilicus. Exploration revealed numerous adhesions which made the dissection difficult. It was found

that there was a perforation of the cardia into the right crus. The fundus and upper one-half of the stomach had rotated through the hiatus hernia into the right posterior mediastinum. There was difficulty in reducing the volvulus because the cardia was very adherent to the right crus. The incision was then extended through the seventh intercostal space. The cardia was then separated from the right crus. The perforation was closed, the volvulus was reduced and the hiatus hernia was repaired. The first postoperative day the patient was alert, mentally clear, the vital signs were stable, the temperature was 102.6 rectally. During the second postoperative day the patient became hypotensive on small dosages of Leritine, Codeine or Numorphan. Chest x-ray revealed a right massive atelectasis which was relieved by bronchoscopy. The blood electrolytes were normal. The blood PH was 7.34. Repeat EKG showed no essential change from the previous EKG on admission. The hemoglobin was 12.5 Gms. The postoperative treatment had consisted of I.V. fluids, Levin tube suction, antibiotics and intermittent positive pressure breathing. On the third postoperative day an Aramine drip I.V. was started because of hypotension. Later on the third postoperative day this patient expired suddenly.

An autopsy was obtained. It revealed extensive bilateral pulmonary atelectasis and congestion. The esophagus was extensively dilated. There was hemorrhagic infarction of the proximal stomach. There was no evidence of pulmonary embolus or myocardial infarction. This case was a paresophageal hernia with volvulus of the stomach of the organo-axis type with bleeding.

DISCUSSION

Volvulus of the stomach presenting as an emergency is an uncommon situation. Although the number of cases reported of volvulus through traumatic rupture of the diaphragm are numerous, the number of cases of volvulus of the stomach is small. John Berg reported the first case of volvulus of the stomach in 1866. Schackleford reports 12 cases of volvulus of the stomach through a hiatus hernia. Blatt and Felson report nine cases of this entity and Sellors reports one case. As in many entities, more occur than are reported. Probably there are two types of volvulus of the stomach. In mesenterio-axial volvulus rotation occurs

from right to left around a vertical axis at right angles to the cardio-pyloric line. In the organo-axis the stomach rotates around an axis of a line connecting the cardia to the pylorus and rotation usually occurs right to left, but may occur in the reverse. The former of the two types is more common.

Classically, hiatus hernia is divided into sliding and paresophageal. Sliding hiatus hernias are more common to form stricture and paresophageal hernias are more prone to volvulus and hemorrhage.

Clinical findings: The chief presenting symptoms are pain and vomiting. The pain may radiate to the back, thorax or left shoulder. The vomitus may be clear or bloody. Anorexia, retching, singultus, nausea, shortness of breath may be present. Physical examination may reveal signs of shock, elevation of temperature, an individual in acute distress, tenderness of the epigastrium or left upper quadrant and slight abdominal distension. Borchartd and Lenormont's triad may be present: 1) vomiting without results 2) circumscribed epigastric pain 3) a gastric tube cannot be inserted. The general condition deteriorates rapidly. Pain and vomiting become more severe and shock and prostration are the final outcome.

Roentgenographic findings: The roentgen findings are the key to the diagnosis. The plain film may reveal one gas fluid collection in the posterior mediastinum and a gas fluid collection below the diaphragm. The small bowels may be dilated with gas. Barium studies will often reveal a funnel tapering of the barium, with complete or partial obstruction. The cardia will be beneath the diaphragm. Delayed films may be of help.

Pathology: The pathological physiology of this condition shows that usually without treatment, the condition leads to rapid deterioration. In volvulus of the stomach, gastric secretion and gases are unable to escape. This leads to distension and further distension. Gastric distension is followed by further secretion. By this process, ischemia and strangulation of the gastric wall result. When hematemesis occurs, it is due to infarction of the stomach wall.

The exciting causes may be left phrenic nerve resection, acute dilatation of the stomach, intractable vomiting and excessive anti-peristaltic movement. The precipitating causes are due to increases in intra-abdominal pressure, such as defecation, urination or parturition.

Treatment consists of conservative or operative management. A few cases of conservative management are reported. This consists of Levin tube suction with reduction of the volvulus. Intravenous fluids and analgesics are given as supportive measures. Operative management is the method of choice. Technically, a left thoractomy incision would be the incision of choice. In infants the trans-abdominal approach is preferred. The volvulus should be reduced and the proximal stomach should be resected if necessary. The hiatus hernia should be repaired. Mortality ranges from 40 to 90 per cent.

SUMMARY

A complicated case of volvulus of the stomach through a diaphragmatic hernia has been given. The symptoms, signs, roentgen findings and pathological processes have been discussed.

AMA REAFFIRMS EFFORT TO END DISCRIMINATION

The American Medical Association reaffirmed at the New York Annual Meeting that "within the frame work of its constitution and bylaws" it will "continue to use all of its influence to end discriminatory racial exclusion policies or practices by any medical societies which permit such policies or practices to exist."

It was pointed out that "Encouraging progress has been made toward the goal first adopted by the House of Delegates in 1950 and reaffirmed in 1963 of eliminating 'restrictive membership privileges based on race' in constituent and component medical societies."

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