# *Case study*

## CASE REPORT ON NURSING MANAGEMENT OF A CLIENT WITH HIATUS HERNIA


### ABSTRACT

A hiatus hernia occurs when a portion of the stomach protrudes into the chest cavity. It enters through the same entrance through which the food tube (oesophagus) travels to the stomach. A case of an 39-year-old male with a history of diabetic presented to the emergency room with acute onset shortness of breath, epigastric pain and chest pain. The stomach bulges up into the chest through that opening in a hiatal hernia (also known as a hiatus hernia). The client was having burning sensation in epigastric region since from 2-5 year, acid reflux after taking food, heartburn, nausea, regurgitation, vomiting, and abdominal pain and irritation. After the physical examination, history collection and investigations he was diagnosed as case of hiatus hernia.The study's main focus is on professional management and excellent nursing care, which may be able to give the holistic care that hiatus hernia requires while also efficiently treating the difficult case. Following a complete recovery, the patient's multidisciplinary health care team works together to help the patient reclaim his or her prior level of independence and contentment.



**KEYWORDS:** Hiatus hernia, Gastro-esophagus reflux, Abdominal pain, Irritatation, Shortness of breath


### INTRODUCTION:

The majority of hiatus hernias are acquired, with the exception of a few congenital types[1]. Hiatus hernias are classified as either sliding (95 percent) or paraesophageal (only 5% of the whole group[6]. In a sliding hernia, the GEJ slides upward to an intrathoracic position, but in a paraesophageal hernia, a portion of the stomach moves into the thorax by the side of the GEJ and the GEJ's position remains unchanged [8,9].This can happen as the supportive structural elements around the GEJ become more brittle with aging [2]. It has been reported in uncommon cases in association with congenital abnormalities of the ligaments that support the GEJ, resulting in its presentation in young age groups, as in our case[3].

Abnormal stomach mobility can be caused by attenuated and/or insufficient fixation of supporting gastric ligaments around the GEJ of these hernias remain asymptomatic [4]. Symptoms of gastro-oesophageal reflux disease, such as vomiting after meals, heartburn, and retrosternal chest pain, are common presentations [8]. Irritability was reported by our patient, which could be the result of a retrosternal burning sensation[10].An X-ray of the chest may be normal [4,2.] A thoracoabdominal CT scan can assist diagnose paraesophageal hernia since it can show all of the anatomical characteristics surrounding the diaphragm [11,13].Most of the time, no suspicion of paraesophageal hernia is aroused, and a CT scan is not ordered at first In order to confirm

paraesophageal,upper gastrointestinal series such as barium swallow and follow-up are required [7,8].

Barium swallow can also depict the position of herniated fundus of the stomach in relation to its either longitudinal or transverse axis, as detection of volvulus of stomach requires emergent surgical correction[4–6] .The stomach's herniated fundus can twist around its own longitudinal axis or along the axis of the mesentery, resulting in organoaxial or mesentricoaxial volvulus, respectively [12,18]. Both of these are extremely rare occurrences [2].Irritability in infants is usually caused by retrosternal discomfort, which is often overlooked because irritability is often attributed to other causes, most commonly meningitis[6,8]. Clinicians must be aware of this crucial causality because a delay in diagnosis may put a herniated fundus of the stomach at risk of increasing growth and greater complication rates [9,6].

## CASE PRESENTATION

### PATIENT INFORMATION:

A 65-year-old man was admitted to the Acharya Vinoba Bhave Rural Hospital with cheif complaints of burning sensations in the epigastric region, acid reflux after eating, heartburn, nausea, regurgitation, vomiting, and abdominal discomfort and irritatation, all of which were treated as soon as possible. His condition improved once he received medication. He was having family history of diabetes. Gastric reflux and chest discomfort was discovered during a physical examination. He was also having spasmodic stomach pain. On admission, he complained of hoarseness and hicupps for the first time. The rest of the physical examination reveal no abnormality. He was unable to maintain his personal hygiene. The patient comes from a lower-middle-class background. His family was free of both communicable and non-communicable diseases. He and his family had good interpersonal interactions with relatives, neighbors, and other family members.

### PHYSICAL EXAMINATION:

The physical examination our client had shown Gastroesophageal reflux, chest pain, irritatation, stomach pain, and hiccups are all symptoms of a hiatus hernia. As a result of the pain he often appears unwell and uncomfortable. He frequently had a mild neck pain examination. As soon as feasible, treatment was initiated.

### DIAGNOSTIC ASSESSMENT:

Blood test: Haemoglobin% -12.1%, total Red Blood Cell count-4.72million/cu.mm, total White Blood Cell count-7100/cu.mm, total platelet count-4.59lacs/cu.mm, Albumin-4.2 g/dl, Globulin-5.9 g/dl in liver function test, urea-42mg%, creatinine-7.8mg%, sodium-137meq/L, potassium-3.8meq/L, T3, T4 and TSH were all normal reading in renal function test.Transthoracic echocardiography is a type of echocardiogram that looks at the heart from Mild aortic stenosis with an aortic valve peak velocity of 2.2 m/s and an aortic valve mean gradient of 11 mmHg, mildly dilated left atrium, normal left ventricular systolic function with an ejection fraction of

>55 percent, Grade I diastolic dysfunction, and mild to moderate increase in estimated systolic pulmonary artery pressure (50–55 m) were discovered 5 weeks.During the same time frame, a pulmonary function test revealed FEV1/FVC 79 percent of predicted, FVC 59 percent, and FEV1 63 percent of predicted, FVC 63 percent of projected, total lung capacity 53 percent of predicted, indicating a restrictive pattern.

**MEDICAL MANAGEMENT:**

Your treatment will be determined by the severity and characteristics of your haital hernia. If you have no symptoms, your doctor would probably advise you to undergo regular checkups, a computed tomography scan, and magnetic resonance imaging to keep an eye on you. Analgesics for pain relief and antacids to neutralize stomach acid may be prescribed by your doctor.Esomeprazole 49 mg tab (BD), 2 mcg cyanocobalamin, 3 mg opanthenol syrup-2 tsp (TDS). Proton pump inhibitors, medications to limit acid generation Medications that stop acid production and mend the esophagus, as well as antacids depending on the patient's needs. Patients who are experiencing symptoms should be offered surgical therapy.

SURGICAL MANAGEMENT

Endoluminal fundoplication procedure was done. No incisions was made. Instead of that surgeon inserted an endoscope, which has a lighted camera, through patients mouth and down into the esophagus. Then they'll place small clips at the point where the stomach meets the esophagus. These clips can help prevent stomach acid and food from backing up into the esophagus.

**NURSING MANAGEMENT:**

A mix of lifestyle adjustments, drugs, and, if necessary, special procedures or surgeries are used to manage haital hernia. The optimal treatment for the patient's condition will be determined by nurses. The vital signs of the patient are meticulously recorded. Encourage the patient to eat smaller meals to minimize stomach volume and prevent reflux of gastric contents into the esophagus. Avoiding fatty foods, which cause reflux and cause stomach emptying to be delayed. After eating, refrain from lying down for at least 1 hour. If you're overweight, you'll need to lose weight. Avoiding bending at the waist or wearing clothing that is too tight. Advise the patient to contact a health care institution as soon as they have acute chest pain, as this could suggest a paraesophageal hernia incarceration.Assure the patient that he or she is not experiencing a heart attack, but any chest pain should be taken seriously and reported to the patient's physician.

1. As needed, prepared the patient for diagnostic testing.
2. Medication administered as per doctor's prescription.
3. Provided the patient sleep in a reverse Trendelenburg posture with the head of the bed elevated to lower intra-abdominal pressure and prevent aspiration.

4. Determined the patient's reaction to therapy.
5. Observed for problems, particularly considerable bleeding, pulmonary aspiration, or imprisonment or strangulation of the herniated stomach region.
6. Following endoscopy, observed for indicators of perforation such as low blood pressure, quick pulse, shock, and acute discomfort generated by the endoscope.
7. Educate the patient about the illness. Explained important symptoms, diagnostic testing, and indicated therapies.
8. Explained recommended drugs, outlining their intended activities as well as any potential side effects.
9. Education given about dietary adjustments that might help minimizes reflux.
10. Encouraged the patient to avoid lying down for 2 hours after eating

**NURSING DIAGNOSIS**

1. Risk for aspiration related to impaired swallowing depressed cough and reflexes secondary to disease condition.
2. Risk of aspiration related to gastric reflux activity.
3. Risk of ineffective tissue perfusion related hernia and the possibility of obstruction and strangulation.
4. Acute pain related to swelling and pressure as manifested by the patient verbalization.
5. Risk of fear and anxiety related to hospitalization.
6. Impaired swallowing related to function changes as evidenced by dyspnea or inflammation process by dyspnea or inflammation process.
7. Acute pain related to surgical procedure as manifested by patient verbalization.

## DISCUSSION

Hiatal hernia is characterized by the loss of the stomach's distal oesophagus and its placement in the abdomen, as well as the sliding of part or all of these organs through the oesophageal hiatus into the chest . Hiatal hernia is a common condition that is frequently linked to gastroesophageal reflux illness [1,4.] Cough, heartburn, dyspepsia, dysphagia, and weight loss are the most common symptoms in middle-aged women.In many situations, no symptoms are reported, and the pathology is discovered during routine examinations [6,5]. When the top region of your stomach bulges through the big muscle that separates your abdomen and chest, it is called a hiatal hernia (diaphragm)[12,16].

The hiatal hernia accounts for 0.3–15% of all hiatal hernias [3,2]. The most common symptoms of a large hiatal hernia are pain, heartburn, and nausea[11]. Generally, the common presentations of giant hiatal hernia include pain, heartburn, vomiting, dysphagia, and anemia [1]. Respiratory symptoms are considered a very uncommon clinical presentation [12,13]. Hiatal hernia can manifest with angina pectoris, arrhythmias, recurrent heart failure[3], and exercise impairment, in addition to shortness of breath as a rare symptom[16].Hiatal hernia is more common as people become older, with about 10% of people under the age of 30 developing one and >60% of people over the age of 70[13].

Surprisingly, majority of the cases with atypical hiatal hernia recorded were all older patients, especially those above the age of 80[14]. The aim standard and definitive treatment for hiatal hernia

is surgical surgery[10]. Spirometry has indicated an improvement in FEV1, FVC, and total lung capacity after the repair, leading in an increase in exercise capacity[15].The treatment for a paraesophageal hiatus hernia is either laparoscopic or open surgery[6].Sliding hiatus hernias can be left alone until issues arise, as the risk of developing acute symptoms requiring emergency surgery (1.4 percent) is not much higher than the risk of developing chronic symptoms requiring surgery (1.1 percent)[9]. In the juvenile age group, however, paraesophageal hiatus hernia invariably need surgical treatment[18].Improved laparoscopic repair techniques have recently reduced problems and recurrence rates[4]. Given the rarity of paraesophageal hernia in children and its modest presentation, which can be readily misinterpreted as other non-surgical illnesses, doctors should be aware of the possibility of this essential surgical entity, as some of it may necessitate surgery [8,9].

## CONCLUSION:

Hiatal hernia is frequently detected during a test or treatment to figure out what's causing heartburn, chest pain, or upper abdominal pain. A hiatal hernia may necessitate surgery in some cases. Surgery is usually reserved for those who haven't found relief from drugs for heartburn and acid reflux, or who have complications such as severe inflammation or esophageal constriction.hiatal hernia can be repaired with surgery that involves drawing your stomach down into your abdomen, reducing the size of the opening in your diaphragm, or reconstructing an esophageal sphincter.Hiatal hernia surgery may be paired with weight-loss surgery, such as a sleeve gastrectomy, in some circumstances. Most hiatal hernias are harmless and require no treatment. However, because some patients with a hiatal hernia also have GERD symptoms, treatment begins with GERD management techniques.

Making lifestyle modifications, such as losing weight if you're overweight, is one of them. Meal portion amounts should be reduced. Avoiding acidic meals that irritate the esophageal lining, such as tomato sauce and citrus fruits or drinks. Limiting fried and fatty foods, as well as foods and beverages containing sugar.single incision in your chest wall (thoracotomy) or a minimally invasive procedure called laparoscopy can be used to do surgery. A tiny camera and sophisticated surgical tools are inserted through many small incisions in your abdomen during laparoscopic surgery. The procedure is then carried out as your surgeon watches images from within your body on a television monitor.

After drinking a gritty substance that coats and fills the interior lining of your digestive track, X-rays are taken. Your doctor can see a silhouette of your esophagus, stomach, and upper intestine thanks to the covering. A thin, flexible tube with a light and camera (endoscope) is inserted down your throat by your doctor to inspect the inside of your esophagus and stomach and check for inflammation. When you swallow, this test monitors the rhythmic muscular contractions in your esophagus. The coordination and force exerted by the muscles of your esophagus are also measured using esophageal manometry.

**Disclaimer regarding Consent and Ethical Approval:**

As per university standard guideline, participant consent and ethical approval have been collected and preserved by the authors

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