Case Report

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Diaphragmatic Hernia in a Parturient: A Case Report

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Abstract

Introduction: Diaphragmatic hernia is a condition in which abdominal contents enter the thoracic cavity through an abnormal opening in the diaphragm. Though diaphragmatic hernia in pregnancy is a rare occurrence it imposes challenges in terms of mode and time of delivery along with repair of hernia.

Case Report: A 34-year female G2 P1 L1 with 37 weeks 4 days gestational age presented in latent labour. Patient had undergone an Emergency LSCS with B/L Tubectomy under General Anaesthesia anda live male baby of birth weight 3.74 kgs was delivered. After extubation the patient had one episode of drop in saturation and oxygen supplementation was started immediately and patient was shifted to icu for observation.

A chest x-ray was done which showed bowel loops in the thoracic cavity. Later an HRCT was done confirming large defects of 5 x 7 cm of stomach, small bowel loops, large bowel loops and mesentery herniating into the left hemithorax with mild mediastinal shift to right and complete collapse of left lung suggesting diaphragmatic hernia. There was no evidence of a gastric volvulus or bowel ischemia.

Patient gives history of abdominal pain radiating to back and thigh along with fever and dry cough since 2 days. No history of chest pain, breathlessness, palpitations, epigastric pain, nausea, vomiting, headache, blurring of vision or burning micturition. No significant past or family history. General surgery and pulmonology opinion was taken which explained the need for cardio thoracic surgery intervention and the patient was referred to higher centre.

Conclusion: Diaphragmatic hernia complicating pregnancies are rare in occurrence imposing severe complications. Early diagnosis clinically and radiologically should be evaluated in pregnant women having gastrointestinal symptoms not responding to standard treatments.

Keywords: Diaphragmatic Hernia; Medical and Surgical Complications of Pregnancy; Conservative and Surgical Repairs.

Key Message: Usually diaphragmatic hernia presents in early childhood and needs surgical intervention. This was a rare presentation in the third trimester of pregnancy with mild gastrointestinal symptoms. In diaphragmatic hernia the most complicating symptom is obstruction which need immediate surgical intervention.

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INTRODUCTION

Diaphragmatic hernias may be congenital or acquired. The most common hernias during pregnancy are acquired (hiatal) hernias caused by increased intra abdominal pressure. Diaphragmatic

hernias presenting in pregnancy are rare and the management depends on the size of the hernial opening, degree of visceral herniation and gestational age of the parturient.

CASE REPORT

A 34-year-old second gravida with 37 weeks 4 days gestational age presented to the emergency department with abdominal pain intermittent in nature radiating to the back and thigh. Patient also complains of fever and dry cough since 2 days. She doesn't give any history of nausea, abdominal pain, vomiting and dyspnea. The patient was a known case of hypertension since 2 years and was on *Tab. Labetalol 100* mg. She has a previous history of undergoing lower segment caesarean section under spinal anaesthesia 4 years back which was uneventful. There is no significant past or family history.

On presentation the patient's heart rate was 96 bpm and blood pressure 140/90 mmHg respiratory rate of 18, temperature 100°F with oxygen saturations at 95% on room air.

Cardiac evaluation was normal. Respiratory examination revealed decreased breath sounds on the left side and per abdomen palpation showed no signs of tenderness with normal bowel sounds. Complete blood count were within normal limits. Renal function tests and Liver function tests were within normal limits.

Electrocardiogram revealed a sinus rhythm.

Patient was planned for an Emergency LSCS with B/L Tubectomy under General anaesthesia and after successful delivery of a single live male baby of birth weight 3.74 kgs the patient was extubated following which she had drop in saturation and was shifted to ICU with oxygen supplementation.

A chest x-ray was done immediate post-operative period which showed raised left hemi diaphragm with bowel loops visible in the left thorax.

An HRCT was done which revealed large defect of 5 x 7 cm in left hemi diaphragm with herniation of stomach, small bowel loops, large bowel loops and mesentery into the left hemithorax with mild mediastinal shift to right and complete collapse of left lung suggesting diaphragmatic hernia.

The patient reported asymptomatic prior and during pregnancy and had no prior chest or abdominal imaging for comparison.

General surgery and pulmonology opinion was taken which explained the need for cardio thoracic surgery intervention and the patient was referred to higher center.

DISCUSSION

Diaphragmatic hernia in pregnancy is classified into three congenital, hiatal, traumatic of which hiatal hernia is the most common presentation occurring in pregnancy but of rare occurrence. Most of the patients are asymptomatic and present with vague postprandial epigastric distress.

Pressure by the gravid uterus causes increase in intra abdominal pressure contributing to a more dangerous presentation. The contents of the hernia will enter into the thoracic cavity.

Symptoms depend on the size of the defect and the contents. Common gastrointestinal symptoms include recurrent abdominal pain, nausea, vomiting and abdominal distension. Respiratory symptoms most commonly are chest pain and dyspnoea. Life threatening complications are severe dyspnoea and strangulation of viscera.

Guiding symptoms of hyperemesis gravidarum are nausea and vomiting which are usually self-limiting and these can be unspecific symptoms of maternal diaphragmatic hernia. One should be cautious of these symptoms also and care should be taken to rule out diaphragmatic hernia.

Rapid sequence intubation is the preferred method to reduce the risk of aspiration when these patients are taken up for caesarean delivery. Nausea and vomiting can be treated and controlled using a nasogastric tube and suctioning. This will also reduce the intra-abdominal pressures.

A significant obstacle to expectant management is ensuring enough nutrition during pregnancy, prolonged malnutrition is linked to an increase in perinatal morbidity and mortality, vitamin and electrolyte deficiencies leading to weight loss.

CONCLUSION

Maternal diaphragmatic hernia complicating pregnancies is a rare occurrence with severe complications. Early diagnosis clinically and radiologically should be evaluated in pregnant women having gastrointestinal symptoms not responding to standard treatments.

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