ORIGINAL RESEARCH PAPER
Volume-9 | Issue-5 | May-2020 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

TRAUMATIC DIAPHRAGMATIC HERNIA - DELAYED PRESENTATION

Medicine

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KEYWORDS

INTRODUCTION:

Diaphragmatic hernia after blunt injury is common and very difficult to diagnose. It can go undiagnosed due to limitations in the imaging modalities and atypical presentation both clinically and radiologically. High index of suspicion is essential to avoid misdiagnosis and to prevent further complications. The following is a case of traumatic diaphragmatic hernia with delayed presentation.

CASE REPORT:

A 55 years female presented with chief complaints of shortness of breath for past two years, and aggravated for past one month dyspnea grade II MMRC and pain in the left hypochondrium for past three months. . She had a history of fall from height ten years ago after which she experienced pain in the left hypochondrium and subsided without any treatment On examination, her vitals were stable, percussion revealed dullness on left infrascapular area, traubes space obliterated ,breath sounds were absent and bowel sounds were present on left inter and infrascapular area. CVS- heart sound heard on right side of the chest

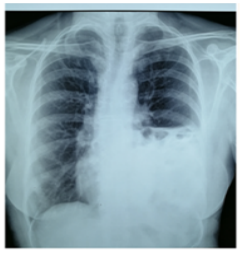

Figure 1 a

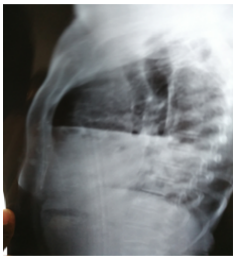

Figure 1 b

Figure 1.(a) Chest – X-ray PA view and (b)lateral view. Note the presence of bowel shadow in left hemithorax

Chest x-ray PA view shows heterogenous opacity on left mid and lower zone, silhouetting of left heart border and diaphragm. Lateral view showed presence of bowel shadows in the chest

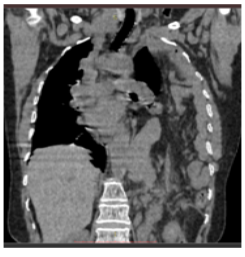

Figure2a

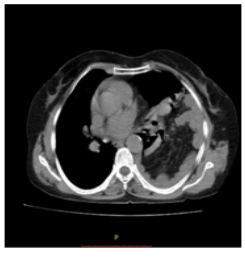

Figure 2b

Figure 2. CT THORAX (2a) coronal view showing the diaphragmatic defect and herniated contents in left hemithorax, (2b) Axial views at different levels showing mediastinal shift towards right.

Herniation of bowel loops along with mesentery noted through the defect in the posterior aspect of left dome of diaphragm in HRCT.

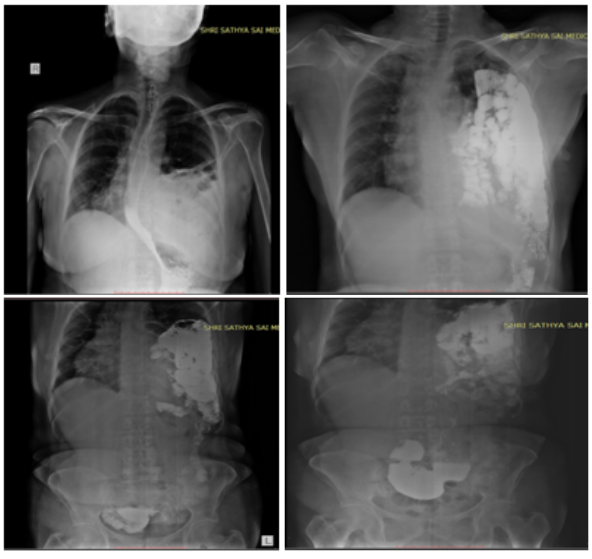

Figure 3 Barium Meal Follow Through –contrast Filled Bowel Loops Are Seen Herniating Through The Defect In The Left Hemithorax

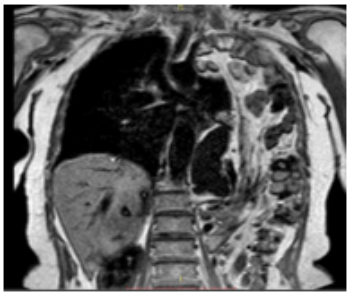

Figure 4. MRI of the patient showing herniation of bowel loops along the diaphragmatic defect in to the left hemithorax.

DISCUSSION:

Diaphragmatic hernia is nothing but herniation of abdominal contents through hole in the diaphragm[1]. Types of diaphragmatic hernia include Congenital, Morgagni's hernia, Bochdalek hernia, Hiatal hernia,Iatrogenic diaphragmatic hernia.

TRAUMATIC DIAPRHAGMATIC HERNIA:

Traumatic diaphragmatic hernia occurs in 5% patients with blunt trauma such as fall from height and during road traffic accident[2]. And over all it contributes 10% of cases of diaphragmatic hernia Most commonly seen after blunt penetrating trauma and only 4% undergo surgery[3,4] . Most common side affected in blunt trauma is left 80% of cases . There are three types of diaphragmatic hernia :type 1 when the diagnosis is made immediately after the injury ,type 2 -when the diagnosis is made during recovery period, type 3-when it is diagnosed

later the stage with complication [5,6].Delayed presentations even up to 15 years after initially injury can occur and patient can be completely asymptomatic.Most common in the central and posterior portion of the diaphragm. Most common hernial contents are omentum, stomach or colon, although any organ including kidney maybe found. Herniated contents results in compression of underlying lung parenchyma and reduces the venous return. Dysfunctional diaphragm results in impairment of ventilation[3]

CLINICAL PRESENTATION :

Upper abdominal or lower chest pain with dyspnea which may worse after eating are the most common symptoms[4].Bowel sounds may be audible on the chest on auscultation . This can be elicited asking the patients to drink a cup of water.If strangulation occurs - progressive pain , dyspnea ,vomiting , retching, guarding of abdomen, signs of shock can occur[4]. Perforation of bowel on rare occasion cause dreadful complications leading to death of the patient.

INVESTIGATIONS:

Chest x ray is the initial investigation of choice which may show bowel shadows. Nasogastric tube is seen in the chest. CT will help to confirm the diagnosis. Several signs are described in CT such as discontinuity of the diaphragm, elevation of diaphragm on the affected side, collar sign (narrowing of bowel loop at the site of perforation in diaphragm and in intrathoracic region)[3,6]. MRI helps in delineating the soft tissues. USG helps in the bed side diagnosis.

MANAGEMENT:

Surgery is the treatment of choice of choice for diaphragmatic hernia. Either it can be repaired through thoracotomy or minimally invasive surgeries [7].

CONCLUSION:

It is a case of traumatic diaphragmatic hernia in which patient was asymptomatic for ten years. Patient was treated conservatively and referred to cardiothoracic surgery for surgical intervention to prevent further complications.

REFERENCE:

1. Rekha A, Vikrama A. 2010;3(2):23-5 Traumatic diaphragmatic hernia. https:// www. sriramachandra. edu.in/university/pdf/research/journals/jul_dec_2010/book_6.pdf
2. Lal S, Kailasia Y, Chouhan S, Gaharwar AP, Shrivastava GP. 2011 Jul 1;2011(7):6 Delayed presentation of post traumatic diaphragmatic hernia. Journal of surgical case reports. https:// academic.oup.com/jscr/article/2011/7/6/2282340
3.. Ganie FA, Lone H, Lone GN, Wani ML, Ganie SA. 2013;18(1):12 Delayed presentation of traumatic diaphragmatic hernia: a diagnosis of suspicion with increased morbidity and mortality. Trauma monthly. https:// www. ncbi. nlm. nih. gov/ pmc/ articles/ PM C3 860644/
4. Reddy SV, Anuradha B, Sushma P, Jagadeesh AB. K Varun Prakash. 2015;3(6):241-3. Traumatic Diaphragmatic Hernia: A Case Report. Int J Sci c Study. https://www.ijss-sn.com/uploads/2/0/1/5/20153321/ijss_sep_cr12.pdf
5. Kaur R, Prabhakar A, Kochhar S, Dalal U. 2015 Jul;25(3):226.Blunt traumatic diaphragmatic hernia: pictorial review of CT signs. The Indian journal of radiology & imaging. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4531445/
6. Carter BN. 1951;65:56-72. Traumatic diaphragmatic hernia. Am J Roentgenol Rad. https://www.ncbi.nlm.nih.gov/pubmed/14799666
7. Shah R, Sabanathan S, Mearns AJ, Choudhury AK. 1995 Nov 1;60(5):1444-9.Traumatic rupture of diaphragm. The Annals of thoracic surgery. https:// www. annalsthoracic surgery. org/ article/ 0003-4975(95)00629-Y/fulltext