PP068

A DELAYED PRESENTATION OF CONGENITAL DIAPHRAGMATIC HERNIA

Nor Adliza Che Wahab[1], Mohd Shukruddeen Salleh[1], Norlaili Zakarai[1]
[1] *Hospital Kuala Krai, Kuala Krai, Kelantan, Malaysia*

INTRODUCTION

Congenital diaphragmatic hernia commonly manifests early in neonatal period due to life threatening pulmonary complications. Delayed presentation of CDH is uncommon and poses a diagnostic challenge to clinicians because of its various presentations that often leads to misdiagnosis.

CASE REPORT

- A 2-year-old girl, born premature at 35 weeks, was referred from a district hospital as left lung bullae. She presented with sudden onset abdominal pain, associated with two episodes of non-projectile vomiting and breathlessness since one day prior.
- On examination, she was tachypnoiec and tachycardic with SpO_2 of 98% on room air. Blood pressure was normotensive. Air entry was reduced on left side chest. Abdominal examination was normal.
- Initial chest X-ray (CXR) showed a thin-walled radiolucent lesion occupied the left hemithorax which interpreted as left lung bullae, with mediastinal shift to the right.

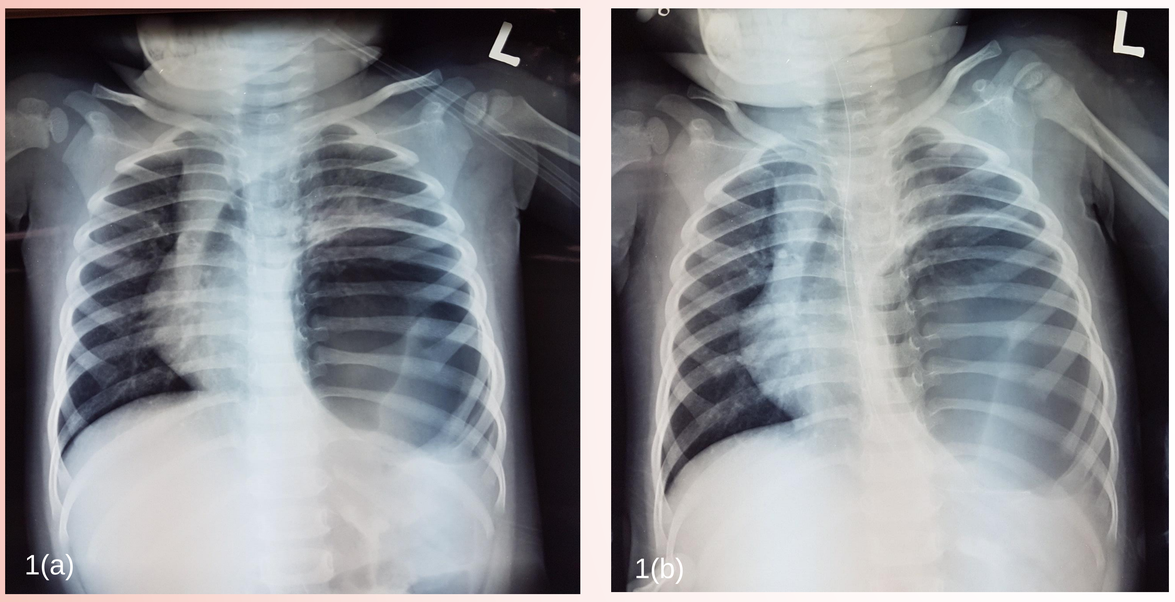

Fig 1. (a) Initial chest radiograph and (b) post nasogastric tube insertion.

- Nasogastric tube (NGT) was inserted but it was not visualized in the left hemithorax to suggest CDH.
- Consent for chest tube drainage was sought from parents. Nonetheless, they strongly refused despite all risks explained; thus, she was referred to our hospital for further stabilization.
- At our emergency department, 140mL 'coffee ground' fluid and 30mL air were evacuated via manual aspiration of NGT. Ultrasound examination was done, yet the finding was inconclusive.
- Computed tomography (CT) thorax then performed, showed NGT in left thorax inside the left radiolucent lesion which appeared smaller after NGT aspiration. Diagnosis of CDH was established.

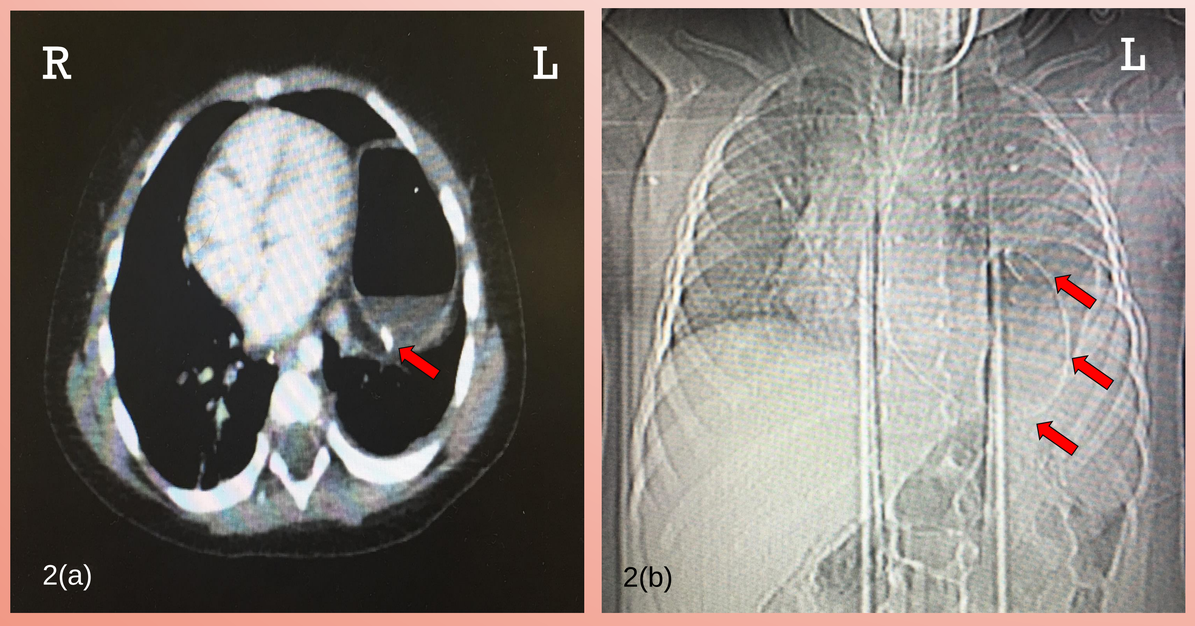

Fig 3(a) Computed tomography thorax showing stomach in the left thoracic cavity with nasogastric tube (arrow) in-situ. Nasogastric tube (arrow) can be seen inside the left lung field in Fig 3(b)

- On laparotomy, a 5cm X 3cm hernial defect was found at left diaphragm antero-laterally with intra-thoracic stomach, greater omentum and splenic flexure of colon. Primary repair of diaphragmatic hernia subsequently followed.

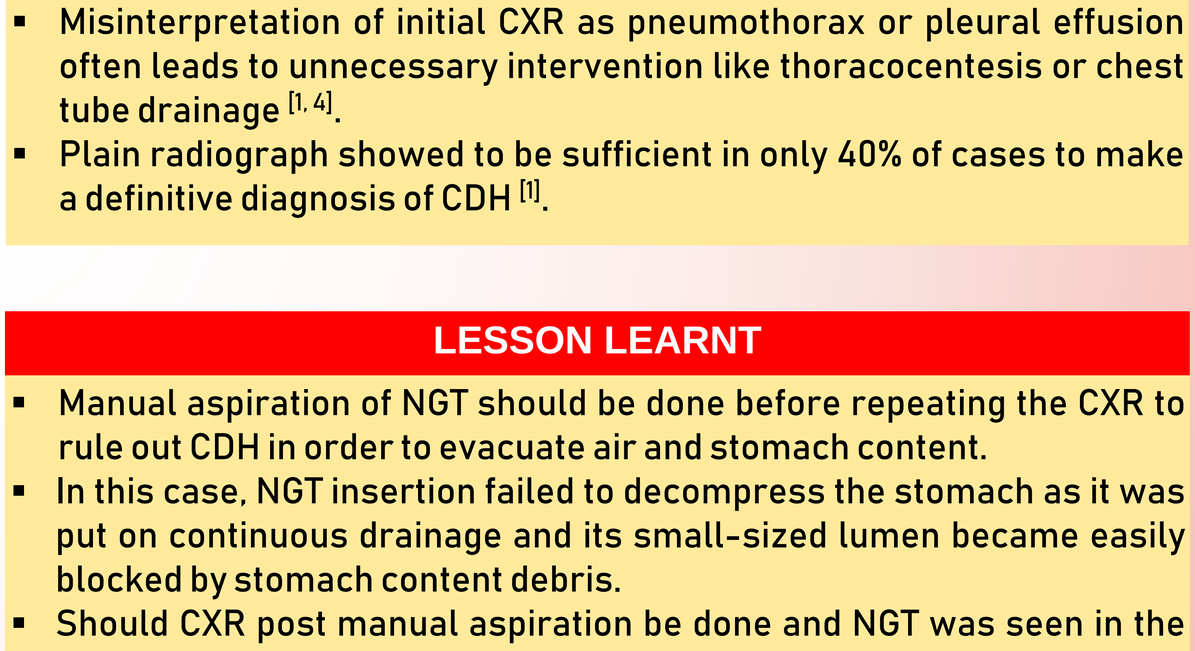

Fig 4. Intra-operative finding showing (a) a hernial defect found at the left diaphragm which had primary repair done in Fig 4(b).

DISCUSSION

- The occurrence of late-presenting CDH has been reported to be as high as 45.5% of all CDH cases [1] with median ages of 2.5 years [3].
- CDH may present late with wide spectrum of gastrointestinal or respiratory symptoms [1,2,4].
- Small defect contribute to delayed presentation of CDH later in life [3].
- Misinterpretation of initial CXR as pneumothorax or pleural effusion often leads to unnecessary intervention like thoracocentesis or chest tube drainage [1, 4].
- Plain radiograph showed to be sufficient in only 40% of cases to make a definitive diagnosis of CDH [1].

LESSON LEARNT

- Manual aspiration of NGT should be done before repeating the CXR to rule out CDH in order to evacuate air and stomach content.
- In this case, NGT insertion failed to decompress the stomach as it was put on continuous drainage and its small-sized lumen became easily blocked by stomach content debris.
- Should CXR post manual aspiration be done and NGT was seen in the left hemithorax, CT-thorax may be unnecessary in this patient.

CONCLUSION

In conclusion, CDH can have delayed presentation beyond neonatal period and should be suspected in any child with abnormal CXR presented with gastrointestinal or respiratory symptoms.

ACKNOWLEDGEMENT

The authors wish to thank the Director General of Health, Malaysia for his kind permission to present this poster.

REFERENCES

1. Elhalaby EA, Abo Sikeena MH. Delayed presentation of congenital diaphragmatic hernia. Pediatric Surgery International. 2002. 18;480.
2. Kim DJ, Chung JH. Late-presenting diaphragmatic hernia in children the experience of single institution in Korea. Yonsei Medical Journal. 2013. 54(5):1143-1148.
3. Kotecha S et al. Congenital diaphragmatic hernia. European Respiratory Journal. 2012. 39: 820-829.
4. Schimpl G, Fotter R, Sauer H. Congenital diaphragmatic hernia presented after newborn period. European Journal of Pediatrics. 1993. 152:765-768.

For further details, please contact:
Nor Adliza bt Che' Wahab (adlizawahab@gmail.com)
Emergency & Trauma Department, Hospital Kuala Krai, Kelantan. Tel: 09-9611666