

Ectopic thoracic kidney in a child presenting with recurrent cough: a case report and review of literature

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Ectopic thoracic kidney is a rare clinical entity in pediatric patients. It is usually an incidental finding on evaluation of patients with recurrent cough or mediastinal mass. Its clinical course is benign. We are presenting a case of right ectopic intrathoracic kidney diagnosed incidentally on contrast-enhanced computed tomography chest during evaluation of a child with recurrent cough. *Ann Pediatr Surg* 13:172–173 © 2017 Annals of Pediatric Surgery.

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Introduction

Ectopic kidney is defined as abnormal location of the kidney at any place other than the renal fossa. Its incidence is one in 1000 live births. The known positions for ectopic kidney are pelvic, iliac, abdominal, thoracic, and so on. There is slightly male preponderance. Ectopic kidney is more commonly found on the left side [1]. The intrathoracic location of the ectopic kidney is most rare, having 5% of all renal ectopia [2]. The diagnosis of ectopic thoracic kidney is usually incidental on evaluation of patients with recurrent cough. It is usually detected on plain radiograph abdomen as mediastinal mass and confirmed on further evaluation [3]. Here we are presenting a case of right ectopic thoracic kidney detected incidentally on contrast-enhanced computed tomography (CECT) chest.

Case

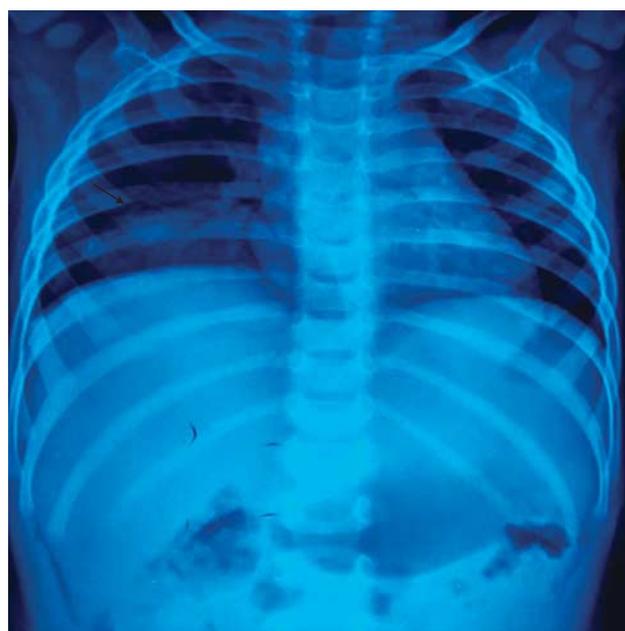
A one and half-year-old girl was presented to us in the outpatient department with complaints of recurrent episodes of cough and fever since 1 month of age. She was apparently well up to 1 month of age. After that she developed cough and fever that was initially managed conservatively. After some time these symptoms recurred again. For this, she took consultation of many clinicians. On clinical evaluation there was no positive finding, except that there was a decrease in breath sounds on auscultation over the right basal part of the lung. On plain radiograph chest, there was right lower lobe haziness present (Fig. 1). Diagnosis of mediastinal mass was made. CECT chest was done showing herniation of the right kidney to the right hemithorax (Fig. 2). After that, ultrasonography of abdomen was done to confirm the absence of the right kidney in the pelvis. Left kidney was at its normal position. There were no symptoms associated with the urinary system. The patient was managed conservatively for cough and fever and kept on regular follow-up.

Discussion

Thoracic ectopic kidney occurs as partial or complete protrusion of the kidney above the hemidiaphragm into

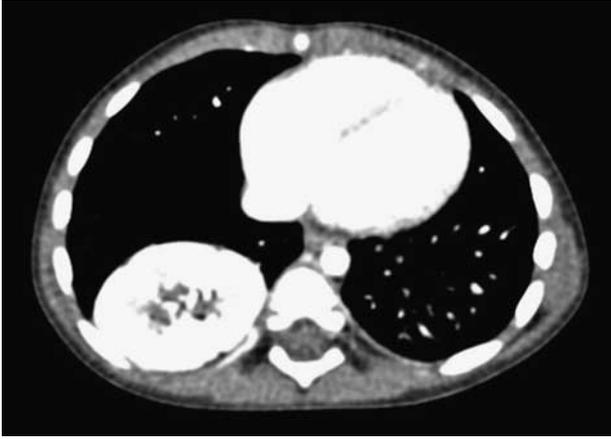
the mediastinum [4]. It has a slightly left side predominance [5]. It was first diagnosed by Wolfromm [6] using retrograde pyelography. Until now, almost 100 cases of thoracic kidney have been reported [7]. The proposed mechanisms behind ectopic thoracic kidney are accelerated ascent of the kidney, abnormal development of the hemidiaphragm, effect of developing liver and adrenal, and persistence of nephrogenic cord [8]. Most cases of ectopic thoracic kidney are asymptomatic with benign clinical course. The diagnosis could be suspected in a patient having recurrent chest symptoms with the absence of one kidney at its normal position on ultrasonography. CECT thorax is diagnostic [9]. Nuclear imaging could be used to differentiate ectopic kidney from other tissues [10]. In a majority of cases treatment is not required.

Fig. 1



Showing ectopic thoracic kidney as mediastinal haziness – arrow.

Fig. 2



Contrast-enhanced computed tomography chest showing right ectopic thoracic kidney.

Conclusion

Ectopic thoracic kidney is a rare clinical entity with benign course. It is a diagnostic challenge to the clinicians. To avoid unnecessary investigations, knowledge of this clinical entity is important. Although it is a rare condition, it is worth mentioning in the differential diagnosis of mediastinal masses.

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Conflicts of interest

There are no conflicts of interest.

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