

## ECTOPIC THORACIC KIDNEY\*

Suat Çağlayan MD\*\*, Işın Yaprak MD\*\*\*, Ahmet Arıkan MD\*\*\*\*  
Özlem Çağlayan MD\*\*\*\*\*, Tomris Özgür MD\*\*\*\*\*

*Key words: ectopia, kidney, thoracic kidney*

Ectopic intrathoracic kidney is a very rare developmental anomaly which is usually asymptomatic and is an incidental finding on chest radiographs taken for other reasons. In a series of 15,919 autopsies performed on children, twenty-two cases of ectopic kidney were reported and only one case was diagnosed as intrathoracic.<sup>1</sup> Most intrathoracic kidneys which occur predominantly in males, are located in the left hemithorax. About sixty cases of this anomaly have been reported to date.<sup>1-5</sup> Other congenital abnormalities may, however, be associated with ectopic intrathoracic kidney.<sup>4</sup> In this paper we report a case of intrathoracic kidney, the purpose of which is three-fold:

(1) To draw the attention of the clinician to the existence of intrathoracic kidney in the differential diagnosis of low chest densities. (2) To report the youngest female case of intrathoracic kidney, of which, up until now, there have been no published accounts in the literature. Incidentally, our case was that of a female which is in contrast to the reports demonstrating male preponderance of this anomaly. (3) To stress that these types of kidneys function very well and that there is no need for medical therapy or surgical intervention after the correct diagnosis is made.

### Case Report

A five-month-old female infant was hospitalized with the diagnosis of bronchopneumonia. The infant was febrile and auscultatory findings were consistent with bronchopneumonia. Plain chest radiograph showed parahilar and paracardial infiltrates supporting the clinical diagnosis. There was an additional dome-shaped density on the left diaphragm superimposed on the cardiac silhouette (Fig. 1). Ultrasonography demonstrated that the dome-shaped density was a kidney with normal anatomical structures. For further clarification, intravenous urography (Fig. 2), scintigraphy (Fig. 3), and computerized tomography (Fig. 4) were performed which all verified the existence of an abnormally located left kidney.

---

\* From the Department of Pediatrics, S.S.K. Tepecik Teaching Hospital, Izmir.

\*\* Associate Professor of Pediatrics, S.S.K. Tepecik Teaching Hospital.

\*\*\* Pediatrician, S.S.K. Tepecik Teaching Hospital.

\*\*\*\* Pediatric Surgeon, S.S.K. Tepecik Teaching Hospital.

\*\*\*\*\* Radiologist and Specialist in Nuclear Medicine, Sono-Nuclear Medical Center, Izmir.

\*\*\*\*\* Associate Professor of Morphology, Aegean University Faculty of Medicine, Izmir.



Fig. 1: Plain chest and abdominal radiographs of the patient. Note the dome-shaped density on the left diaphragm superimposed on the cardiac silhouette.



Fig. 2: Intravenous pyelogram of the patient.

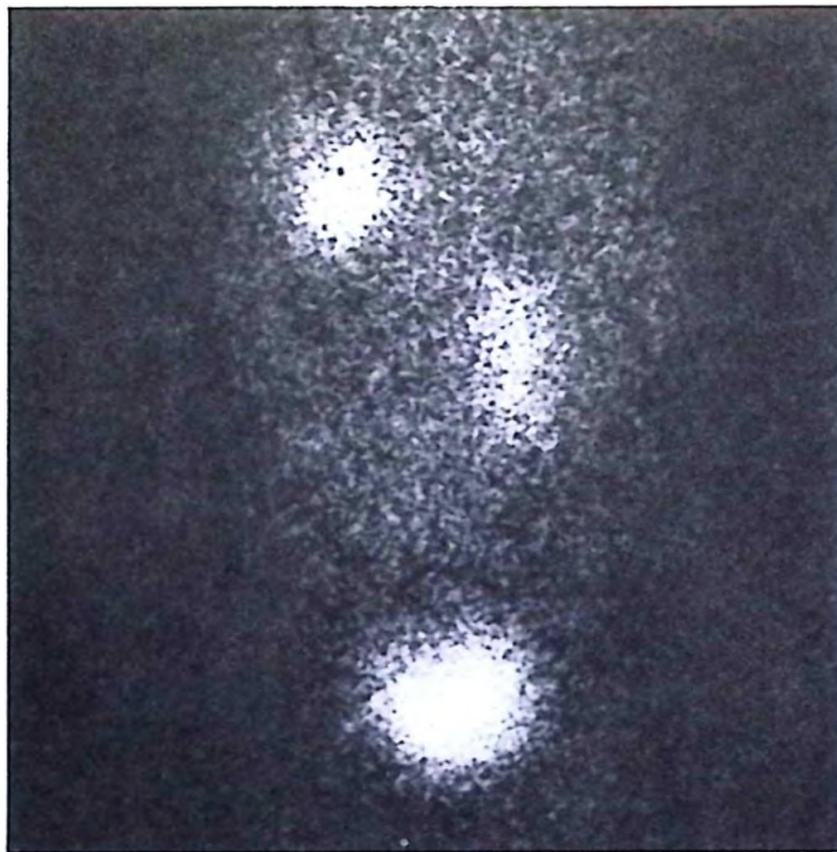


Fig. 3: Renal scintigram demonstrating ectopic kidney.

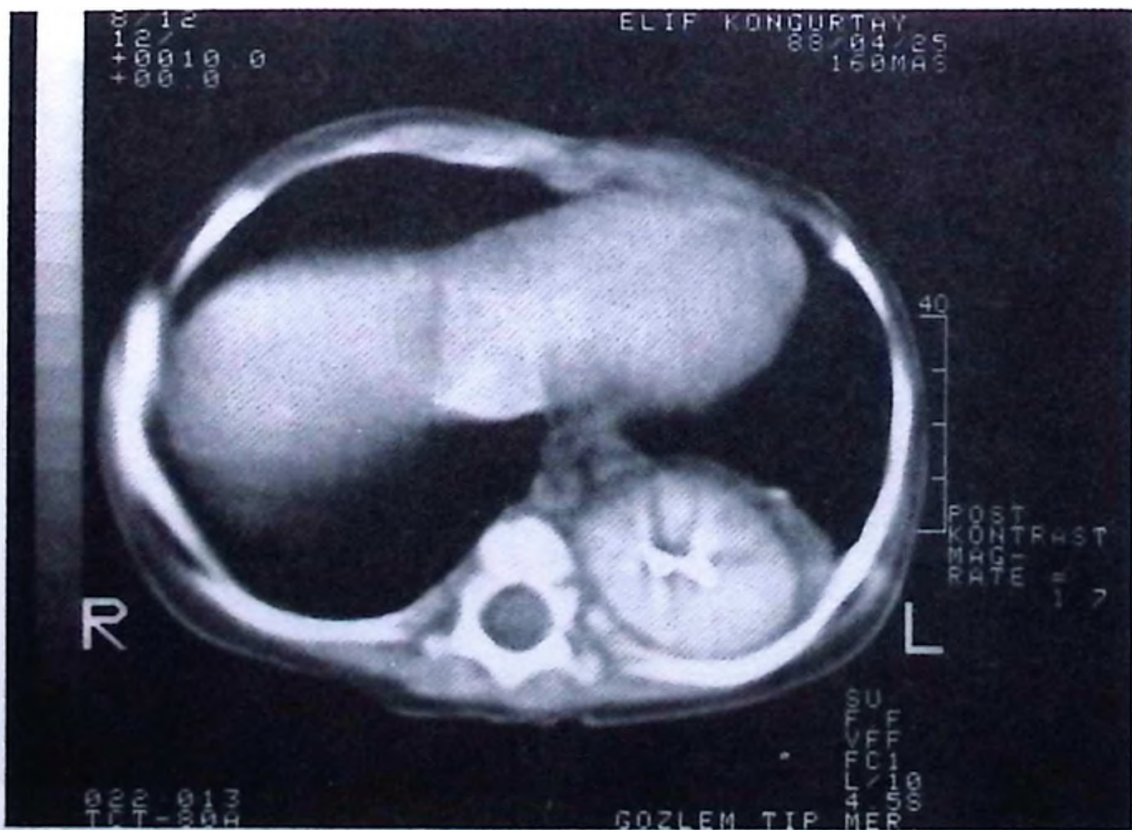


Fig. 4: Computerized tomogram of the patient.

## Discussion

Intrathoracic kidney is a very rare congenital anomaly occurring at all ages. It is usually encountered during the evaluation of routine chest radiographs. The density suggesting intrathoracic kidney is usually a dome-shaped shadow masked by the heart and is sometimes interpreted as a pathology of the lung. It is necessary to distinguish this anomaly from a mass lesion. Although low ectopic kidneys are frequently prone to infection and stone formation, intrathoracic kidneys are usually asymptomatic and function normally.<sup>1-5</sup>

## Summary

A five-month-old female infant was hospitalized for bronchopneumonia. Ultrasonography and other studies demonstrated the presence of an ectopic thoracic kidney with normal anatomical structures.

## REFERENCES

1. Campbell MF. Renal ectopy. *J Urol* 24 : 187, 1930.
2. Usta HY Rızk F : Delayed appearance of an intrathoracic kidney. *Pediatr Radiol* 14 : 449 1984.
3. Ogunbiyi O.A: Ectopic thoracic kidney. *Afr J Med Med Sci.* 15 : 99, 1986.
4. Hawass ND, Kolawole TM, El – badawi MG, et al. Intrathoracic kidneys : report of 6 cases and a review of the literature. *Eur Urol*, 14 : 83, 1988.
5. Malek RS, Kelalis PP, Burke EC : Ectopic kidney in children with frequency of association with other malformation *Mayo Clin Proc* 46 : 461, 1971.