Ectasia of the rete testis: Beware of this masquerader

Ankur Gadodia, Ankur Goyal, Sanjay Thulkar
Department of Radio-Diagnosis, All India Institute of Medical Sciences, New Delhi, India

ABSTRACT
Cystic/tubular ectasia of the rete testis is a rare benign entity and must be differentiated from testicular neoplasm. We report a case of bilateral rete testis-associated epididymal cyst in patient with abdominal mass. Scrotal swelling clinically was interpreted as testicular neoplasm.

Key words: Rete, testes, ultrasound.

INTRODUCTION
Rete testis is an anastomosing network of delicate tubules located in the hilum of the testicle (mediastinum testis) that carries sperm from the seminiferous tubules to the vasa efferentia. Rete tubular ectasia is a disorder of the rete testis in which many benign cysts are present. It is a rare benign entity having a typical sonographic appearance of cluster of small anechoic structures in the confluence of the mediastinum testis. It is usually asymptomatic and discovered incidentally on ultrasound. The main significance of this condition is that it must be differentiated from testicular neoplasm. This problem surfaces as a diagnostic dilemma when this condition is incidentally detected on scrotal ultrasonogram (USG) in patients presenting with testicular/scrotal mass or pain. While almost all malignant testicular tumors are solid lesions, some, such as teratoma, may have cystic components.

CASE REPORT
A 32-year-old male presented with slowly progressive abdominal mass. There was associated bilateral painless scrotal swelling. No fever or constitutional symptoms were present. Clinical diagnosis of testicular tumor was made. CECT of the abdomen revealed multiple enlarged retroperitoneal nodes. No peritoneal thickening/enhancement, free fluid, or liver/splenic focal lesions were seen. USG revealed numerous small discrete anechoic cystic structures clustered together in the region of rete

Figure 1: Sagittal sonogram of the left testis (a) and right testis (b) shows an ovoid cluster of small cystic elements (arrows) within the mediastinum testis, suggestive of tubular ectasia of the rete testis.
Ectasia of the rete testis is an acquired condition which can be associated with and occur as a result of mechanical compression of the epididymis or spermatic cord by surgical, traumatic, neoplastic or infectious processes and ischemic or hormonally induced atrophic alterations in epididymal tubules. Scrotal surgery or disorders associated with obstruction, such as vasectomy or epididymitis, may be associated with dilatation of the rete testis.\textsuperscript{1,2} Spermatocele and epididymal cysts are also commonly associated with ectatic rete testis.\textsuperscript{3,4} While a testicular tumor may compress the efferent ducts and cause ectasia, the solid mass should be distinct from the rete testis dilation. So an associated adjacent tumor must be ruled out. Ovoid cluster of anechoic cystic spaces that are located peripherally in the mediastinum testis, without a solid component within or adjacent to it, with no flow within the lesion on pulsed or color Doppler imaging and normal adjacent testicular parenchyma – these features are pathognomonic for cystic ectasia of the rete testis. Tubular ectasia of the rete testis is bilateral in approximately one-third of cases.\textsuperscript{5} In our case bilateral involvement was seen.

In addition, the typical patient with ecstatic rete testis is older than patients with a testicular germ cell tumor. Median age of the patients found to have ectasia of the rete testis was 62 years.\textsuperscript{6} The age of the patient, clinical presentation, and tumor marker status allow diagnosis of a tumor with fair certainty. In our case, the age of patient was less than previously reported cases and no associated testicular tumor was seen.

Cystic ectasia of the rete testis must be differentiated from other benign intratesticular lesions, notably cystic dysplasia and intratesticular varicocele.\textsuperscript{6} Cystic dysplasia is similar sonographically and histologically, but it is a congenital lesion that occurs in children and is associated with ipsilateral renal or urogenital excretory duct malformations. Cystic ectasia can be differentiated from intratesticular varicocele on color Doppler ultrasound. Furthermore, cystic ectasia should be distinguished from the rare papillary adenocarcinoma of the rete testis, in which a solid mass in the rete testis should be evident. Based on clinical and sonographic criteria, the diagnosis of cystic ectasia of the rete testis can usually be made without histological confirmation. MRI is helpful in doubtful cases. Identifying this entity and its associated conditions obviates the need for biopsy or orchiectomy.

**REFERENCES**

1. Brown DL, Benson CB, Doherty FJ, Doubilet PM, DiSalvo DN, Van Alstyne GA, \textit{et al.} Cystic testicular mass caused by dilated rete testis: Sonographic findings in 31 cases. AJR Am J Roentgenol 1992;158: 1257-9.
2. Gooding GA, Leonhardt W, Stein R. Testicular cysts: US findings. Radiology 1987;163:537-8.
3. Older RA, Watson LR. Tubular ectasia of the rete testis: A benign condition with a sonographic appearance that may be misinterpreted as malignant. J Urol 1994;152:477.
4. Tartar MV, Trambert MA, Balsara ZN, Mattrey RF. Tubular ectasia of the testicle: Sonographic and MR imaging appearance. AJR Am J Roentgenol 1993;160:539-42.
5. Rouvière O, Bouvier R, Pangaud C, Jeune C, Dawahra M, Lyonnet D. Tubular ectasia of the rete testis: A potential pitfall in scrotal imaging. Eur Radiol 1999;9:1862-8.
6. Burrus JK, Lockhart ME, Kenney PJ, Kolettis PN. Cystic ectasia of the rete testis: Clinical and radiographic features. J Urol 2002;168:1436-8.