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# Bilateral Tubular Ectasia of the Rete Testis Mimicking Testicular Neoplasia: Characteristic Ultrasound Findings and Diagnostic Challenges

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## AUTHORS AND AFFILIATION

Mehdi Salmane<sup>1</sup>, Alia Yassine Kassab<sup>1</sup>, Lina Lasri<sup>1</sup>, Omar El Aoufir<sup>1</sup>, Leila Jroundi<sup>1</sup>

Emergency department of Radiology, Avicenne Hospital, Rabat.

Corresponding author : Mehdi Salmane.

## ABSTRACT

Tubular ectasia of the rete testis is a benign condition characterized by cystic dilatation of the rete testis, usually resulting from partial or complete obstruction of the efferent ducts. Bilateral involvement is uncommon and may simulate more serious testicular pathology. We report the case of a 62-year-old man presenting with chronic scrotal enlargement. Scrotal ultrasonography demonstrated bilateral tubular ectasia of the rete testis associated with a right hydrocele. Recognition of the characteristic sonographic appearance allowed a confident diagnosis and avoided unnecessary invasive procedures.

## KEYWORDS :

Tubular ectasia of the rete testis, Bilateral involvement, Hydrocele, Scrotal ultrasound, Benign testicular lesion.

## MAIN ARTICLE

### INTRODUCTION

Tubular ectasia of the rete testis is a benign acquired condition characterized by dilatation of the seminiferous outflow channels located within the mediastinum testis. It is most commonly encountered in middle-aged and elderly men and is frequently associated with epididymal abnormalities, prior inflammation, trauma, or obstructive processes [1,2].

The diagnosis is primarily based on ultrasound findings, which are often characteristic and allow differentiation from cystic testicular neoplasms [1,3]. Recognition of this entity is important to avoid unnecessary surgical exploration and patient anxiety.

### CLINICAL PRESENTATION

A 62-year-old man was referred to the urology department for evaluation of progressive scrotal enlargement and mild scrotal discomfort evolving over several months.

The patient denied fever, trauma, urinary symptoms, or constitutional manifestations. Physical examination revealed moderate enlargement of the right hemiscrotum without inflammatory signs.

Laboratory investigations, including serum tumor markers, were within normal limits.

### **Ultrasound Findings**

Scrotal ultrasonography demonstrated:

- Multiple clustered anechoic tubular structures located within the mediastinum testis bilaterally.
- Preservation of the surrounding testicular parenchyma.
- Absence of solid intratesticular lesions.
- Associated right hydrocele of moderate volume.
- No suspicious epididymal or testicular mass.

The sonographic appearance was characteristic of bilateral tubular ectasia of the rete testis associated with right hydrocele.

## **DISCUSSION**

Tubular ectasia of the rete testis results from obstruction of the efferent ducts, leading to progressive dilatation of the rete testis [2,4]. The condition is generally asymptomatic and often discovered incidentally during scrotal imaging.

Although unilateral involvement is more frequently reported, bilateral disease may occur and can raise concern for diffuse testicular pathology [2,5]. Ultrasound is the imaging modality of choice and typically demonstrates multiple small cystic or tubular anechoic structures clustered within the mediastinum testis [1,3].

The preservation of normal testicular parenchyma, the absence of a solid component, and the characteristic location within the mediastinum testis are key diagnostic features [1,4].

The principal differential diagnoses include:

- Cystic dysplasia of the rete testis
- Intratesticular varicocele
- Simple intratesticular cysts
- Cystic testicular neoplasms

Recognition of the typical sonographic pattern is essential to avoid unnecessary biopsy or orchiectomy [3,5].

Management is conservative and usually limited to patient reassurance and clinical follow-up when necessary [1,2].

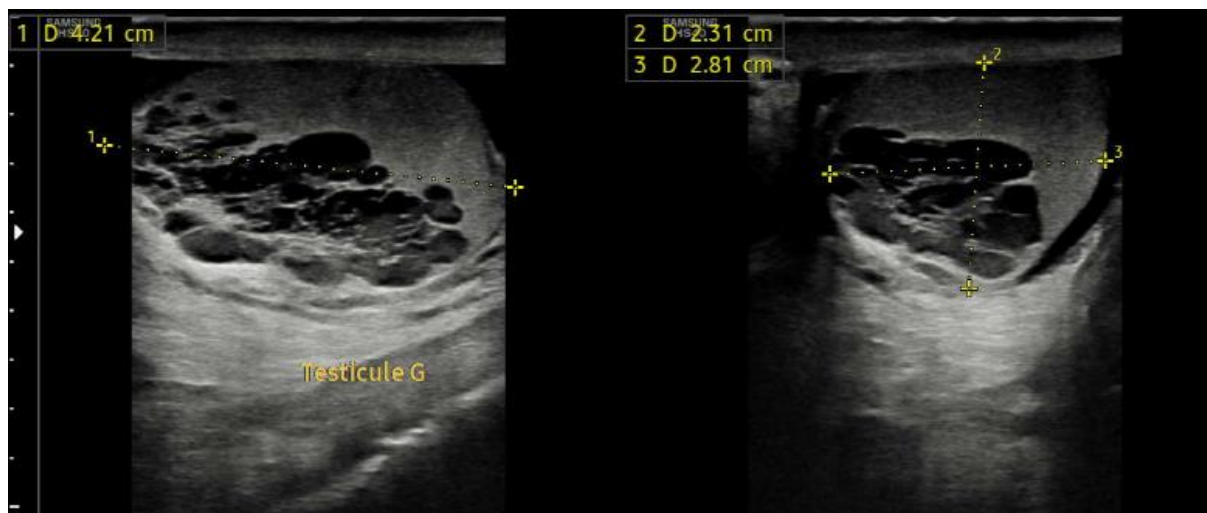
## **CONCLUSION**

Bilateral tubular ectasia of the rete testis is an uncommon benign condition with characteristic ultrasound findings. Awareness of this entity is important because its appearance may mimic more serious testicular disease. Ultrasound allows a confident diagnosis and helps prevent unnecessary invasive procedures. The associated right hydrocele in our patient contributed to the clinical presentation and prompted imaging evaluation.

**FIGURES:**



**Figure 1:** Scrotal ultrasound demonstrating multiple clustered anechoic tubular structures within the mediastinum of the right testis, consistent with tubular ectasia of the rete testis.



**Figure 2:** Scrotal ultrasound showing similar ectatic tubular structures within the mediastinum of the left testis, confirming bilateral involvement.



**Figure 3:** Scrotal ultrasound image demonstrating a right hydrocele associated with hydatid.

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## REFERENCES

- [1] Bertolotto M, Derchi LE, Sidhu PS, et al. Ultrasound of the testes and scrotum: European recommendations and updates. *Eur Radiol.* 2024;34(2):1041-1056.
- [2] Tsili AC, Bertolotto M, Turgut AT, et al. Imaging of non-neoplastic intratesticular lesions. *Insights Imaging.* 2023;14:87.
- [3] Dogra VS, Bhatt S. Benign intratesticular cystic lesions: sonographic spectrum and clinical implications. *Ultrasound Q.* 2022;38(1):25-33.
- [4] Cassidy FH, Ishioka KM, McMahon CJ, et al. Imaging of scrotal abnormalities: current applications and diagnostic approach. *Radiol Clin North Am.* 2022;60(5):881-897.
- [5] Bertolotto M, Aigner F, Richenberg J, et al. Scrotal ultrasound: state-of-the-art review and practical recommendations. *Eur J Radiol.* 2021;141:109804.