

## A Giant Para Ureteral Diverticulum in a Girl Revealed by a Pelvic Mass

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### Abstract

### Case Report

**Introduction:** Para ureteral diverticulum (PUD) or Hutch diverticulum is an uncommon malformative uropathy and leads to diagnostic difficulties. Their pathogenesis is still poorly elucidated and their diagnosis remains difficult. According to some authors, it seems to correspond to an anomaly in the development of the ureteral bud, with imperfect fusion of the trigone and the bladder dome. **Objective:** The aim of this work is to illustrate and show the essential interest of imaging in the positive diagnosis of this pathology. **Case Report:** This is a 14 year old female patient with no pathological history, presented for a hard and painless hypogastric mass with pollakiuria. Pelvic ultrasound showed a cystic formation above and behind the bladder measuring 11.9 x 7.5 cm, anechoic, seeming to communicate with the bladder through a pertus with a significant bilateral ureterohydronephrosis reducing the renal cortex. Retrograde and voiding ureterocystography confirmed the diagnosis of Hutch's diverticulum. It showed a type II vesico-ureteral reflux, with a multidiverticular struggle bladder. **Conclusion:** The diagnosis of para-ureteral diverticulum remains difficult to establish on ultrasound of the urinary tract. UCRM is the examination of choice to confirm the diagnosis. In case of diagnostic doubt, uro-MRI may be indicated.

**Keywords:** Para ureteral diverticulum (PUD), pathogenesis, ureteral bud, pollakiuria.

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## INTRODUCTION

Para ureteral diverticulum (PUD) or Hutch diverticulum is an uncommon malformative uropathy and leads to diagnostic difficulties. Their pathogenesis is still poorly elucidated and their diagnosis remains difficult. According to some authors, it seems to correspond to an anomaly in the development of the ureteral bud, with imperfect fusion of the trigone and the bladder dome.

The aim of this work is to illustrate and show the essential interest of imaging in the positive diagnosis of this pathology.

## OBSERVATION

This is a 14 year old female patient with no pathological history, presented for a hard and painless hypogastric mass with pollakiuria. Pelvic ultrasound showed a cystic formation above and behind the bladder measuring 11.9 x 7.5 cm, anechoic, seeming to communicate with the bladder through a pertus with a significant bilateral ureterohydronephrosis reducing the renal cortex. Retrograde and voiding ureterocystography confirmed the diagnosis of Hutch's diverticulum. It showed a type II vesico-ureteral reflux, with a multidiverticular struggle bladder.



## DISCUSSION

This is a malformative uropathy that is not very frequent and seems to correspond to an anomaly of the ureteral bud with an imperfect fusion of the trigone and the bladder dome, which are of different embryological origin. The symptomatology is not specific and is dominated by recurrent urinary infections.

In terms of imaging, ultrasound is effective for screening and monitoring the evolution of the disease. It allows visualization of a rounded or more rarely oval formation, anechoic with a posterior reinforcement and a thin and regular wall. The CT scan is not performed to diagnose the diverticulum but rather to appreciate its locoregional relationships. It allows the differential diagnosis with a liquid mass of another origin by filling the diverticulum with contrast medium.

## CONCLUSION

The diagnosis of para-ureteral diverticulum remains difficult to establish on ultrasound of the urinary tract. UCRM is the examination of choice to confirm the diagnosis. In case of diagnostic doubt, uro-MRI may be indicated.

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