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# Multilocular Cystic Nephroma in Adult: About A Case Report and Review of the Literature

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**Abstract** **Case Report**

***Background***: Multicystic nephroma is a rare entity of cystic renal tumor, it is a benign non-hereditary pathology with an excellent prognosis, whose preoperative diagnosis is often difficult. Only the anatomopathological study can confirm this. ***Case Presentation:*** 54-year-old patient, having consulted for right low back pain evolving for 6 months without any other associated sign. The clinical examination objectified a slight tenderness of the right lumbar fossa. Abdominal ultrasound revealed a 6 cm multi-partitioned cystic renal mass. The uroscanner identified a right mid-renal cystic mass with multilocules containing fine and regular partitions, with exo-renal development measuring 66*74 mm classified Bosniak IIF. A resection of the entire cyst by lombotomy was performed, the histological examination of which came back in favor of a multicystic nephroma. ***Conclusion:*** The discovery of a cystic renal tumor often represents a source of uncertainty as to its potential for malignancy. The definitive diagnosis can only be made after surgical management with histological study.

**Keywords**: Cystic nephroma; renal cyst; resection.



## BACKGROUND

Cystic nephroma represents a rare benign cystic lesion of the kidney with excellent prognosis, which usually presents as a unilateral multicystic renal mass without solid elements. However, preoperative diagnosis is difficult. Only the anatomopathological study can confirm this [1].

Through this observation we report this rare entity whose recognition is crucial for clinicians and pathologists given its favorable prognosis.

## CASE PRESENTATION

**Patient information:** Mrs. MB, 54 years old, with no notable history (ATCD).

### Clinical Findings

The patient presented right low back pain of a chronic heaviness type, without any other associated sign, evolving in a context of conservation of general condition and apyrexia.

The clinical examination objectified a slight tenderness of the right lumbar fossa.

### Diagnostic Assessment:

Hydatid serology was negative. Abdominal ultrasound revealed a 6 cm multi-partitioned cystic renal mass.

A uroscanner objectified a right kidney of normal size, with bumpy contours by the presence of a mid-renal cystic mass with a thin wall, multiloculated containing fine and regular partitions with exo-renal development, not enhanced after injection of contrast product (PDC), measuring 66*74 mm, presenting an intimate contact with the lower edge of the liver, the second duodenal portion and the right colic angle with loss of the fatty border of separation by place without sign in favor of their invasion. Absence of perirenal fat infiltration. This cyst was classified as type IIF according to the Bosniak classification, first suggesting a type III multivesicular hydatid cyst from Gharbi (Fig 1).

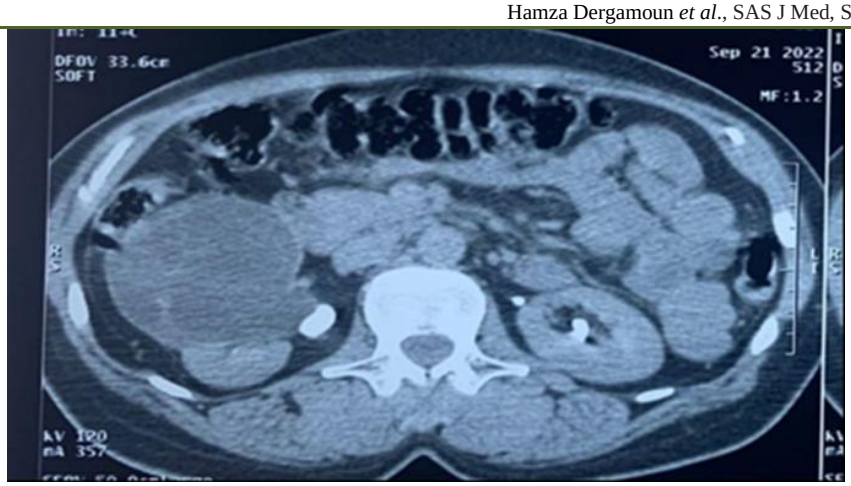


**Figure 1: Axial CT scan showing a voluminous thin-walled right mid-renal multilocular mass, without contact with the excretory cavities**

**Therapeutic intervention:**

Given the clinical and paraclinical elements of the patient and the preoperative appearance of the cyst, we performed a resection of the entire cyst by lumbar approach on the 11th intercostal space.

The anatomo-pathological examination concluded a multilocular cystic nephroma (Fig 2 and 3).

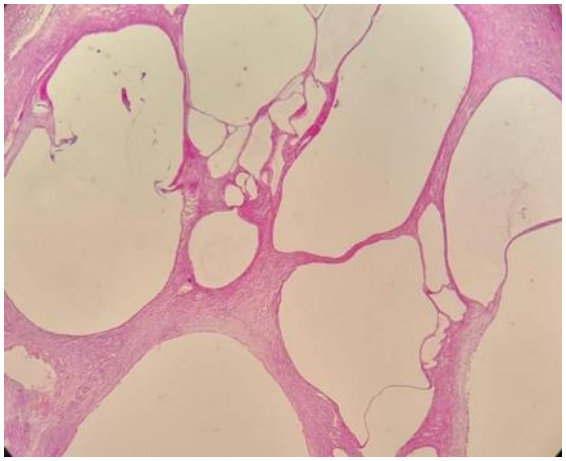

**Figure 2: Multiple cystic cavities of variable size separated by a fibrous stroma (G x 40)**

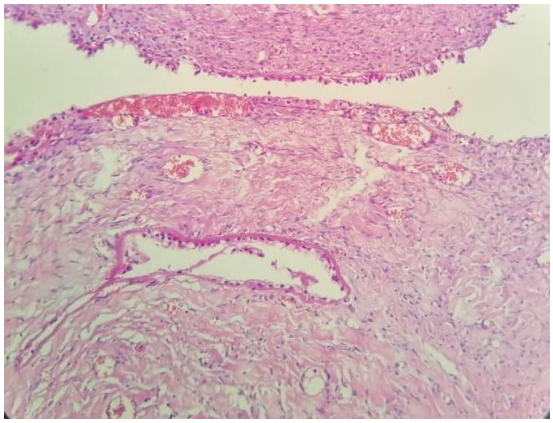

**Figure 3: Cystic cavity lined by a simple cubo-cylindrical epithelium free from cytonuclear atypia (G x 20)**

**Follow-up and outcomes:** The patient had a simple postoperative course.

**Patient perspective:** The patient was told about the entire procedure, complications and results, and she agreed about it.

**Informed consent:** A written informed consent authorizing the publication of this case was signed by the patient.

## DISCUSSION

Cystic nephroma is a rare, non-hereditary, benign tumor that is part of a broad spectrum of cystic tumors found in children and adults [2].

It is associated with a bimodal age distribution, with men being affected between 3 months and 2 years, and women after 30 years.

Kidney cystic nephroma should be considered in atypical kidney cysts.

In 1986, Bosniak established a classification table for these cysts according to CT scan criteria [3]. This classification makes it possible to assess the probability that the patient has cancer, but this type of lesion is always difficult to diagnose.

The clinical manifestations are nonspecific, sometimes including flank pain, macroscopic haematuria, abdominal mass, and urinary tract infection, mainly observed in women with a female/male sex ratio of 8.1. But in the majority of cases, they are asymptomatic and incidentally discovered during a radiological assessment [4].

The diagnosis of cystic masses in imaging is based on the use of the Morton Bosniak CT classification [5] which distinguishes typical cysts (types I and II), indeterminate cystic masses (type III), corresponding either to remodeled cysts, either to benign or malignant cystic tumors and typically carcinomatous type IV masses.

The updated Bosniak classification highlights an atypical cystic lesion requiring non-surgical treatment but requiring monitoring.

IIF renal cysts are presumed to be benign but require surveillance imaging to prove their benignity [6].

In this class, differentiating between a multilocular cyst and a cystic multilocular carcinoma is not possible with imaging. The idea is to organize monitoring and perform excision in the event of modification of the walls of the cyst.

MRI is interesting in cysts with calcifications or hyperdense cysts for the study of the enhancement of the partitions which are in these cases difficult to analyze. Apart from these cases, the performance of CT and MRI are comparable [7].

The diagnosis of cystic nephroma is a diagnosis of exclusion. The main differential diagnoses being: multicystic renal cell carcinoma, segmental cystic disease, multicystic kidney, the others including cystic necrosis (pseudocystic necrotic carcinoma), cystic hamartoma of the renal pelvis and hydatid cyst [8].

The histological examination of the tumor shows renal tumor proliferation dug cavities. Associating epithelial and stromal elements, it is composed of non-communicating cysts and fine septa containing mature tubes [9].

Treatment of cystic nephroma is mainly surgical, especially given the symptoms and the impossibility of excluding malignancy [6]. Conservative surgery can be attempted if the mass measures < 4 cm and is unilateral, unifocal and localized, and when follow-up by imaging is possible [10].

Conservative surgery seems the most appropriate therapeutic attitude in adults who present a well-defined lesion whose nature would be confirmed by extemporaneous histological examination. Although the prognosis is excellent in the long term, postoperative follow-up is always recommended. due to reported local recurrences [2].

## CONCLUSION

Cystic nephroma represents a rare benign cystic lesion of the kidney, always to be considered as a differential diagnosis of malignant cystic renal tumors.

Histological analysis remains the key examination for positive diagnosis. The treatment is essentially surgical. Although the long-term prognosis is excellent.

**Abreviations List**

ATCD: history
MRI: Magnetic Resonance Imaging
PDC: Contrast agent

## REFERENCES

1. Roukhsi, R., & Zouaki, Z. (2021). Néphrome kystique multiloculaire: une tumeur rénale kystique rare. *PAMJ-Clinical Medicine*, *5*(72). doi:10.11604/pamj-cm.2021.5.72.24942.
2. Thibeau, J. F., Sourtzis, S., Lufuma, E. M., Devuyst, E., & Vandendris, M. (2001). Multilocular cystic nephroma in adults. Unusual presentation and review of the literature. *Progres en Urologie: Journal de L'association Francaise D'urologie et de la Societe Francaise D'urologie*, *11*(3), 507-511.
3. Li, G., Badin, G., Berremila, S., Obadia, F., Tostain, J., & Péoc'h, M. (2012). Clinicopathological study and immunohistochemical expression of CA9 in cystic

multilocular renal cell carcinomas. *Progres en Urologie: Journal de L'association Francaise D'urologie et de la Societe Francaise D'urologie*, *22*(10), 572-576.

4. Gill, P., Chen, J. J., Boardman, P., Patel, N., Browning, L., Roberts, I. S., & Verrill, C. (2014). Cystic nephroma with heterotopic bone formation: a pathological and radiological pitfall. *Diagnostic Histopathology*, *20*(8), 329-332.
5. Bosniak, M. A. (1997). The use of the Bosniak classification system for renal cysts and cystic tumors. *The Journal of urology*, *157*(5), 1852-1853.
6. Israel, G. M., & Bosniak, M. A. (2005). An update of the Bosniak renal cyst classification system. *Urology*, *66*(3), 484-488.
7. Israel, G. M., Hindman, N., & Bosniak, M. A. (2004). Evaluation of cystic renal masses: comparison of CT and MR imaging by using the Bosniak classification system. *Radiology*, *231*(2), 365-371.
8. Mohanty, D., Jain, B. K., Agrawal, V., & Gupta, A. (2010). Cystic nephroma: A diagnostic dilemma. *Saudi Journal of Kidney Diseases and Transplantation*, *21*(3), 518-520.
9. Long, J. A., Neuzillet, Y., Correas, J. M., de Fromont, M., Lang, H., Mejean, A., ... & Davin, J. L. (2008). Atypical cysts and cystic tumours of the kidney: histological, radiological and surgical considerations. Conclusions of the AFU 2007 forum. *Progres en Urologie: Journal de L'association Francaise D'urologie et de la Societe Francaise D'urologie*, *19*(1), 8-14.
10. Omar, A. M., Khattak, A. Q., & Lee, J. A. (2006). Cystic renal cell carcinoma arising from multilocular cystic nephroma of the same kidney. *International braz j urol*, *32*, 187-189.