Inflammation and infection

Giant hydatid cyst of the right kidney discovered in a subicterus table

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ABSTRACT

Hydatidosis is a rare parasitic disease that is endemic in many countries of the Mediterranean basin. Among unusual localizations, renal involvement is rarer (2–3% of visceral forms) than splenic and soft tissue localizations but more frequent than cardiac, bony or cerebral localizations.

Introduction

Hydatidosis is an anthropozoonosis due to the development in humans of the larval form of the dog tapeworm, Echinococcus granulosus. Morocco is a highly endemic EK country.¹ In 2006, Morocco counted 1403 cases operated for hydatid cyst, representing an average incidence of 4.55 cases per 100,000 inhabitants¹ yet renal damage remains rare, even in highly endemic countries.² We report an observation of the management of a giant hydatid kidney cyst, in the urology department of the university centre Oujda Maroc.

Observation

The patient was 26 years old, admitted in consultation for chronic abdominal pain with a subicterus, dating back to 18 months but without any notion of fever nor alteration of general state, he is a sheep breeder, lives in the companion and he is in close contact with his dogs.

The examination objectified a sensitivity of the right lumbar fossa with a subicterus.

The biological assessment objectively showed a slight hepatic cholestasis not associated with a biological infectious syndrome.

A CT scan was carried out to reveal a right multi-vesicular collection whose wall rises after injection of the contrast medium measuring 66 mm, this cyst destroying the right renal parenchyma with a mass effect on the adjacent hepatic parenchyma associated with a discreet infiltration at this level (Fig. 1).

The biological assessment carried out during hospitalization in our training did not objectify one of hyperesinophilia, as well as the hydatid serology was negative.

The patient underwent right radical nephrectomy (Fig. 2) with peroperative extraction of the daughter vesicles (Fig. 3).

The evolution was marked by a resumption of activity after 10 days and regression of the subicterus.

Discussion

Hydatidose is a parasitosis endemically widespread in North Africa, some countries around the Mediterranean basin, New Zealand, Australia, Asia, and America.² but kidney localization is rare.¹

Kidney hydatid cyst is often unilateral and single, but sometimes multiple or even bilateral. The reason for consultation is most often a mass syndrome or low back pain or even abdominal pain³, but hydaturia is the only pathognomonic sign, occurring in more than 20% of cases.¹

In 2006, Morocco counted 1403 cases operated on for hydatid cyst, representing an average incidence of 4.55 cases per 100,000 inhabitants.² In Mauritania, the annual incidence of hydatidosis is 1.2% per 100,000 inhabitants. Where as in Tunisia the reported rate is 15/100,000 inhabitants.⁵

Hydatid kidney cyst is mainly found in young adults, between 30 and 50 years old, but is not exceptional in children. There is no predomiance of sex, lesions seem to be more frequent on the left, and 80% of the localizations are polar.¹

Hypereosinophilia exists in less than 50% of cases, the positivity of Hypereosinophilia guides the diagnosis but their negativity does not eliminate it.

Ultrasonography, the examination of choice for these suspicious renal masses, has a reliability of around 80% even in the event of rupture of the cyst in the urinary tract.¹

The CT scan remains the reference radiographic examination, complementing the ultrasonowithout really describing characteristic

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aspects. The CT scan also allows an estimation of the remaining healthy parenchyma for a possible conservative surgery. The CT scan is generally requested in case of ultrasound diagnostic doubt in front of types I and IV or in case of complications.

Surgery remains the treatment of choice for renal hydatid cysts, the technique on which depends the stage of the hydatid cyst according to the Gharbi classification. Lobotomy is therefore the rule, and an anterior approach may be essential in the presence of a large lesion. For many teams, resection of the protruding dome remains the surgical method of choice because it is simple and quick to perform, with fewer post-operative complications.

Total pericystectomy is generally difficult, given the risk of haemorrhage and the risk of communication with the excretory tract. Total pericystectomy indicated in cases of thickened or calcified wall cysts.

Partial nephrectomy: when there is a suspicious lesion.

Total nephrectomy: in the presence of a destroyed kidney or communication of the cyst with the excretory tract. The main cause of total nephrectomy is the lack of a presumptive diagnosis. This is the case for our patient, since a total nephrectomy with extraction of the daughter vesicles is performed intraoperatively.

Conclusion

Hydatidosis remains a public health problem in Morocco especially in rural areas whose renal localization is rare but has serious complications like destroying the kidney as it is the case with our patient whose treatment is total nephrectomy;

What is known about this subject
- the hydatid cyst is a public health problem in certain countries of the Mediterranean basin such as Morocco
- kidney damage is rare but has serious complications
- the treatment is mainly surgical

What is new about your study
- icterus is one of the rare signs of revelation of the hydatid cyst
- the location is mostly on the left while our patient has a right hydatid cyst
- renal localization is rare of the hydatid cyst

Author contributions

Dr. HE conducted the study and wrote the manuscript. Dr. AE and TM and AM and JA participated in the care of the patients. Teacher. AB supervised the writing.

Thanks

We thank the patients and their families for agreeing to give their consent to publish their clinical records for this series.

Declaration of competing interest

The authors do not declare any conflict of interest.

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H. El Farhaoui et al.

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