Unusual presentation of more common disease/injury

Unusual presentation of a simple renal cyst

Veena Maheshwari,¹ Kiran Alam,¹ Manoranjan Varshney,¹ Roobina Khan,¹ Kavita Gaur,¹ S Hasan Harris²

¹Department of Pathology, J.N. Medical College, Aligarh, India;

²Department of Surgery, J.N. Medical College, Aligarh, India

Correspondence to Kavita Gaur, kavgaur@gmail.com

Summary

The authors present the case of a 23-year-old woman who presented with a lump in her right abdomen which was 7 cm in diameter. Ultrasonography showed a unilocular cyst, which was diagnosed as a simple renal cyst. This case is presented for its rare occurrence in young females and unusual clinical presentation as a huge abdominal mass.

BACKGROUND

Renal cysts in younger patients are rare and presentation as an abdominal lump is uncommon.

CASE PRESENTATION

A 23-year-old woman presented to the surgery out-patient department with a 1-year history of a lump in her abdomen. On examination a palpable 7×7 cm lump was present in her right abdomen. The overlying skin was normal. Ultrasonography showed a benign simple cyst with a thin wall without septae, calcifications or solid components. Such cysts do not enhance with contrast and have a density equal to that of water. Laparotomy

was performed and a large cyst attached to the renal parenchyma was excised and sent for histopathological examination. On gross examination, a large unilocular cystic mass measuring 7×5 cm was observed. The outer surface was smooth and shiny with focal areas of congestion. The cyst was filled with watery serous fluid. Maximum wall thickness was 0.5 cm. The inner surface was creamish white in colour with focal areas of congestion (figure 1).

Microscopic examination

The lining of the cyst was comprised of fibrocollagenous tissue with glomeruli and tubules (figure 2).

Figure 1 Photograph of the specimen showing a unilocular opened cyst with a convoluted cut surface with focal areas of congestion.

Figure 2 Microphotograph of the lining of the cyst comprised of fibrocollagenous tissue with glomeruli and tubules (H&E×50).

DIFFERENTIAL DIAGNOSIS

The differential diagnosis includes sinus cyst, pelviectasis and urinary tract obstructions as well as masses, lymphomas or cysts in adjacent organs (spleen, pancreas, retroperitoneum and adrenal glands).

DISCUSSION

Simple renal cyst is a benign lesion of the kidney which may present within the kidney or on its surface and is an uncommon but an important differential diagnosis in the various cystic lesions of the kidney. Simple renal cysts are commonly seen in adulthood and frequency increases with age.¹ The majority of such cysts are small in size, but occasionally become so large that they are palpable on abdominal examination. None of the many theories proposed for simple renal cyst formation have adequately explained its development. Some authors suggest that with advancing age vascular changes affect blood flow to the kidney causing areas of ischaemia or infarct and obstruction of renal tubules leading to formation of the cyst.² Another theory maintains renal cysts are developmental in origin. During organogenesis second to fourth generation uriniferous tubules do not coalesce with the later generation of collecting tubules, thus resulting in cyst formation.³ Other possible causes of cyst formation in children and adults are liquefied haematomas, sterilised abscess and calyceal diverticula that have lost communication with the renal pelvis.^{3–5} In the majority of cases they are asymptomatic but they can present with pain in the abdomen and back

(as in our case), difficulty urinating, presence of blood tinge in the urine and hypertension. Cysts can cause pain due to enlargement and stretching of the cyst wall, pressure on drainage of the kidneys causing blockage, and pressure on other organs such as the stomach and intestines. Rarely, cysts can bleed, rupture or become infected. Diagnosis is by imaging techniques, ultrasound and CT scan. Benign cysts must be differentiated from sinus cysts, pelviectasis and urinary tract obstructions as well as masses, lymphomas or cysts in adjacent organs (spleen, pancreas, retroperitoneum and adrenal glands).⁶ Treatment consists of surgical excision of the cyst and is usually curative. Renal cysts can also be treated with ultrasound guided percutaneous aspiration. This technique is performed under local anaesthesia and 100 ml sterile 99% ethanol is injected into the cyst under ultrasonographic guidance. A long follow-up is needed after this procedure.

Learning points

- ▶ A large abdominal lump in a young female patient can be mistaken for ovarian pathology, so suspicion of a huge renal cyst must be kept in mind.
- ▶ Early diagnosis will prevent complications such as cyst rupture, hydronephrosis, haemorrhage and infection.
- ▶ Surgical excision of the cyst is curative and hence prognosis is good.

Competing interests None.

Patient consent Obtained.

REFERENCES

1. **Tada S**, Yamagishi J, Kobayashi H, *et al*. The incidence of simple renal cyst by computed tomography. *Clin Radiol* 1983;**34**:437–9.
2. **Yamagishi F**, Kitahara N, Mogi W, *et al*. Age-related occurrence of simple renal cysts studied by ultrasonography. *Klin Wochenschr* 1988;**66**:385–7.
3. **Siegel MJ**, McAlister WH. Simple cysts of the kidney in children. *J Urol* 1980;**123**:75–8.
4. **Gordon RL**, Pollack HM, Popky GL, *et al*. Simple serous cysts of the kidney in children. *Radiology* 1979;**131**:357–61.
5. **Mosli H**, MacDonald P, Schillinger J. Caliceal diverticula developing into simple renal cyst. *J Urol* 1986;**136**:658–61.
6. **Nahm A-M**, Ritz E. The renal sinus cyst—the great imitator. *Nephrol Dial Transplant* 2000;**15**:913–14.

This pdf has been created automatically from the final edited text and images.

Copyright 2011 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.

BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Please cite this article as follows (you will need to access the article online to obtain the date of publication).

Maheshwari V, Alam K, Varshney M, Khan R, Gaur K, Harris SH. Unusual presentation of a simple renal cyst. *BMJ Case Reports* 2011;10.1136/bcr.10.2010.3400, date of publication

Become a Fellow of BMJ Case Reports today and you can:

- Submit as many cases as you like
- Enjoy fast sympathetic peer review and rapid publication of accepted articles
- Access all the published articles
- Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact consortiasales@bmjgroup.com

Visit casereports.bmj.com for more articles like this and to become a Fellow