LETTER TO EDITOR

DIAGNOSTIC DILEMMA: CALYCEAL DIVERTICULUM VS COMPLICATED CYST

Sir,

A 35-year-old woman presented with right lower abdominal pain and tenderness without hematuria or lower urinary tract symptoms. Abdominal ultrasonography(USG) revealed a right renal parenchymal cyst with a focus of posterior wall calcification. CT scan [Figure1] done for further evaluation of this complicated cyst, showed a well-defined 2 cm cystic lesion in the upper pole of the right kidney with a plaque like curvilinear peripheral calcific density in the posterior wall. The cyst was situated in the renal parenchyma with its medial margin abutting the renal sinus. This proximity to the renal sinus raised the suspicion of a calyceal diverticulum containing a calculus. Prone CT scans taken 20 minutes before and after intravenous contrast injection, demonstrated movement of the calculus and contrast opacification of the cyst, confirming cyst communication with the collecting system.

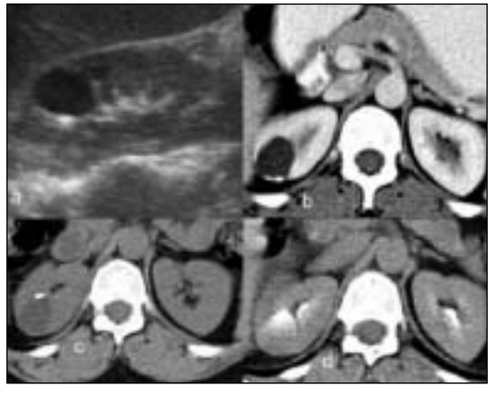

Figure 1 : USG of right kidney - upper pole cyst with linear echogenic plaque in the posterior wall. b. Supine CECT - Cystic lesion with curvilinear plaque like calcification in the posterior wall with no abnormal enhancement of the wall. c. Prone NECT - movement of the calcific plaque towards the anterior wall. d. prone 20minutes delayed CECT - contrast filling with layering in the diverticulum.

Another patient, a 25-year-old lady with recurrent left loin pain and urinary tract infection was found to have a left renal parenchymal cyst with posterior wall calcification on USG. CT scan showed a 2.8 cm left renal cyst abutting the renal sinus with curvilinear calcification in the posterior wall. Subsequent intravenous urogram (IVU) [Figure 2] revealed a mobile calculus within a calyceal diverticulum, which filled with contrast on delayed imaging.

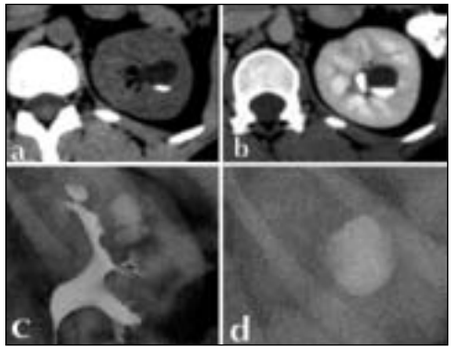

Figure : 2 NECT - plaque like calcification in the posterior wall of a cystic lesion in left kidney. b. Delayed Supine CECT - contrast layering in the cystic lesion. c. 20 minutes delayed IVU - partial filling of the diverticulum showing connection with pelvicalyceal system. d. one hour delayed IVU - complete filling of calyceal diverticulum with contrast.

Anatomically and radiologically the renal cyst and calyceal diverticulum are related, in fact may be considered as different evolutionary forms of the same congenital disorder. Calyceal diverticulum is a urine-containing cavity within the renal parenchyma communicating with the collecting system through a narrow channel and is lined by transitional epithelium.[1] The incidence is 2.1 to 4.5 per 1000 IVUs and are bilateral in 3% of cases.[1] It rarely causes loin pain, urinary tract infection, renal colic, pyuria, haematuria or hypertension.[2] The aetiology is probably congenital, resulting from failure of regression of the third or fourth division of the ureteric buds of the Wolffian duct.[1]

Mobile calculus is a characteristic finding in calyceal diverticulum.[3] A renal cystic lesion detected on USG or CT with plaque-like calcification along the posterior wall should raise the possibility of a calyceal diverticulum with a mobile calculus. Demonstration of the mobility of the calcific focus suggests the diagnosis of a calyceal diverticulum since only cysts communicating with the collecting system tend to form calculi, while renal cysts have calcium in other immobile forms such as mural or septal calcification. Calcification has been reported in 1%–3% of cases of renal cysts.[4] Thick and nodular calcification, wall thickening, or nodularity without enhancement in renal cysts is considered as a complicated cyst of Bosniak Type 2F.[5] Management of the calyceal diverticulum and type 2F lesions differ; while patients symptomatic with the former require percutaneous endoscopic calculus removal, a type 2F cyst only needs close follow up.

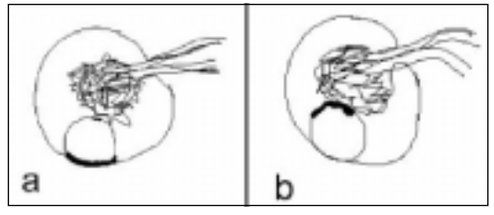

Figure : 3 Schematic line diagram demonstrating a. Supine CT with plaque like calcific density mimicking like a complicated cyst of Bosniak type2. b. prone CT with movement of the plaque like calcific density towards the anterior wall of cyst.

These two cases demonstrate a deceptive similarity between calyceal diverticulum and complicated cyst on USG and CT. However in both cases, demonstration of the proximity of the cyst to the renal sinus, mobility of the calcific density in the cyst, and communication with a calyx revealed the true diagnosis of a calculus within a calyceal diverticulum.

In conclusion, caution should be exercised while diagnosing posterior wall calcification in renal cysts abutting the renal sinus found on USG and CT scan. An attempt should be made to resolve calcific density mobility in the cyst. If USG is equivocal, supine and prone CT sections may reveal the mobile nature of the calcification and make the diagnosis of a calyceal diverticulum with calculus rather than a complicated cyst [Figure3].

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IMIPRAMINE MONOTHERAPY-INDUCED HYPERPIGMENTATION IN AN ADOLESCENT GIRL

Sir,

We report an adolescent girl who, being continuously on tablet imipramine for 5 years, developed hyperpigmentation in the photo-distributed areas.

Ms A, a 20-year-old fair complexioned girl, was registered with a 3-year history of feeling sad with low-confidence levels, early insomnia, and decreased appetite. She met the DSM-IV criteria for major depressive disorder and was treated with tablet imipramine 100 mg/day as a monotherapy for 6 months. Subsequently, the dose of imipramine was titrated to 75 mg/day and she was stabilized on this dose for the past 4 years, except on two occasions when she had recurrences of depressive symptoms, when the dose of imipramine was increased to 125 mg/day for 3 and 5 months, approximately 3 and 2 years back, respectively.

After continuing imipramine therapy for approximately 4 years, she started complaining of change in the color of skin and her face. There was no history of preceding skin disorder before the initiation of imipramine therapy, nor was there any history of exposure to any other psychotropic medication or other drugs including amiodarone, monocycline, and antimalarials, which could have explained the hyperpigmentation. Both the patient and her family members stated noticing the dark complexion of her face. Physical examination revealed gray pigmentation of the face and extensor parts of forearms. Relatively no hyperpigmentation was noticed in the sclera, mucus membrane, nails, or teeth. The results of all routine investigations including serum iron level, blood glucose, liver and renal function, electrolytes, complete blood count, and sedimentation rate were within normal limits.

Dermatologist opinion confirmed this as a case of hyperpigmentation. Skin biopsy showed focal thinning of epidermis, upper epidermis, and on staining revealed melanin. Mild mononuclear infiltration and fibrosis of deeper dermis was noticed. Pigmentation incontinence was stained for iron but it was negative. There was no basal layer degeneration or band-like inflammatory infiltrate suggestive of lichen planus pigmentosus. The probability of adverse drug reaction assessed by using Naranjo probability scale indicated a possible association between the use of imipramine and