Congenital megacalycosis: two cases reports
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Section: Uroradiology & genital male imaging
Case Type: Clinical Cases
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Patient: 22 years, female

Clinical History:
Two young female presented with repetitive urinary tract infections.

Imaging Findings:
We report two cases, 22 and 25 years old females consulted their physician because of repetitive urinary tract infections. Intravenous pyelographies (IV) and excretion urogram were performed and they revealed the presence of uniform dilatation of the calyces with normal infundibula, pelvis and ureters. Obstruction etiology was descarted. In both cases the affection was unilateral.

Discussion:
Congenital megacalycosis (CM), is a rare developmental anomaly of the kidney characterized by nonobstructive dilatation of the renal calyces. It is thought to occur due to abnormal development of the renal medulla, which leads to hypoplastic renal pyramids and blunted, dilated calyces. CM was first described by Puigvert in 1963. The reported cases have been predominantly males. Renal function in the affected kidney is therefore normal and neither functional nor anatomic deterioration generally occur in long term follow-up. The difference between CM and an obstructive uropathy is important because renal function is gradually compromised in obstructive hydronephrosis. CM is characterized by enlarged kidney and uniform dilatation of all the calyces. The infundibula, pelvis and ureter are normal and there is no obstruction in the collecting system. In addition to dilatation, the calyces maybe increased in number (polycalycosis). Cortical tissue is usually normal in thickness and there is no cortex abnormality such as scarring or signs of chronic infection. Stasis of urine in enlarged, redundant calyces promotes the formation of urinary calculi and infection and patients with CM usually present with symptoms of pain, hematuria, fever and dysuria. In the differential diagnosis of CM some clinical conditions causing obstructive uropathy, intermittent hydronephrosis and vesicoureteral reflux should be considered. IVP shows typical dilatation of the calyces without enlargement of pelvis and supports the diagnosis of CM. Ultrasonography (US) usually shows anechoic areas which should be considered ectasia calyceal. Absence of reflux in voiding, cystourethrogram and a normal wash-out pattern in diuretic renal scintigraphy are further radiologic supporters of the diagnosis of CM. Among these modalities, IVP gives the best functional picture and anatomic structure of the kidney and plays the most important role in diagnosis. Surgery is not necessary for the treatment of a primary anomalous kidney with CM but the presence of a stone and infection mandates appropriate therapy. In the long term follow-up period, the patients should be in a follow-up program because of the risk of infection and stone formation, and check-up with routine blood chemistry, urinalysis and IVP are recommended.
**Differential Diagnosis List:** Megacalycosis

**Final Diagnosis:** Megacalycosis

**References:**


