A 3 year-old Female with Palpable Mass in Vulva

A 3.5 year old female with recurrent urinary tract infections from 6 month ago has been treated with oral antibiotics for a long time. She was admitted in nephrology ward for more evaluations. In physical examination a palpable mass was presented at the vulva (Figure 1). Kidney ultrasound showed normal left kidney (LK=81*33 mm) and elongated, duplicated and hydronephrotic right kidney. The patient underwent intravenous pyelography (IVP), DMSA scintigraphy and voiding cystoureterography (VCUG).

What is your diagnosis?

Figure 1. Loin mass at the vulva

Figure 2. DMSA scan of the patient

Figure 3. IVP of the patient
A 3 year-old Female with Palpable Mass in Vulva

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DMSA scintigraphy revealed global decreased cortical function, dilated system and cortical irregularity in right kidney (Figure 2). Intravenous pyelography reported complete duplicated system of right kidney with hydronephrosis of upper pole (Figure 3). Voiding Cystourethrography showed right duplicated refluxing ureter with ureterocele (Figure 4: a and b).

Ureterocele is a cystic dilatation of the lower end of the ureter where it joins the epithelium of the lower urinary tract which is the most common cause of urethral obstruction in girls. Female to male ratio is 4-7. Ureteroceles can occur in otherwise normal single-system ureters or in duplex-system ureters. Vesicoureteral reflux (VUR) is more commonly observed into the lower than the upper pole ureter. The renal units associated with ureteroceles are usually nonfunctioning due to ectopic origin [1]. Symptomatic cases should treat with antibiotic prophylaxis and surgical intervention if medical treatments fail. Method of intervention is determined by size and location of ureterocele and function of the kidneys [2].

References