

CASE REPORT

Refluxing supernumerary kidney: easy to overlook

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SUMMARY

Supernumerary kidney is a rare anomaly and most of the times it is incidentally detected. On occasions it may present with symptoms due to stones, tumours and infections. Supernumerary unit if small and dysplastic may easily escape detection. In this case report, supernumerary kidney presented as vesicoureteric reflux in a 4-year-old male child.

BACKGROUND

Supernumerary kidney is a rare anomaly and can be associated with congenital abnormalities of the urinary tract or extraurinary tract organs. Most of the times its detection is incidental, on occasion, it may present with tumours, calculi or hydronephrosis. Non-functioning supernumerary units, especially the dysplastic units may easily escape detection on functional imaging studies.

CASE PRESENTATION

A 4-year-old male child being evaluated for recurrent urinary tract infections had unremarkable findings on ultrasound (USG). Intravenous urogram (IVU) disclosed normal excreting kidneys but on cystogram phase refluxing ureter subtending the supernumerary kidney was seen (figure 1A, B). A micturating cystourethrogram confirmed the findings of a refluxing ureter (figure 2). Cystoscopy revealed two separate ureteric orifices on the left side, with ureteric orifice draining the



Figure 2 Cystogram showing gross reflux in the supernumerary kidney.

supernumerary kidney being lateralised and gaping. Retrograde ureterogram clearly delineated the

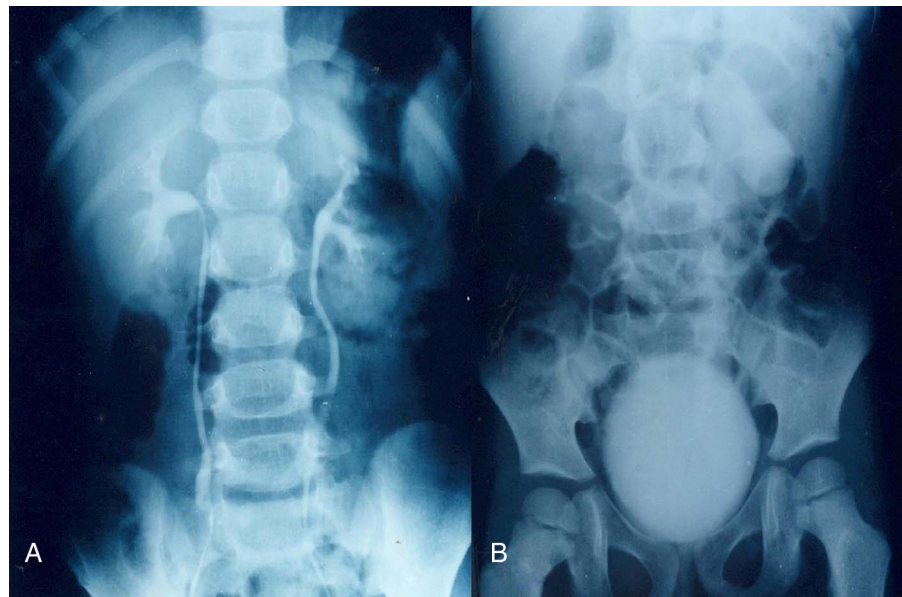
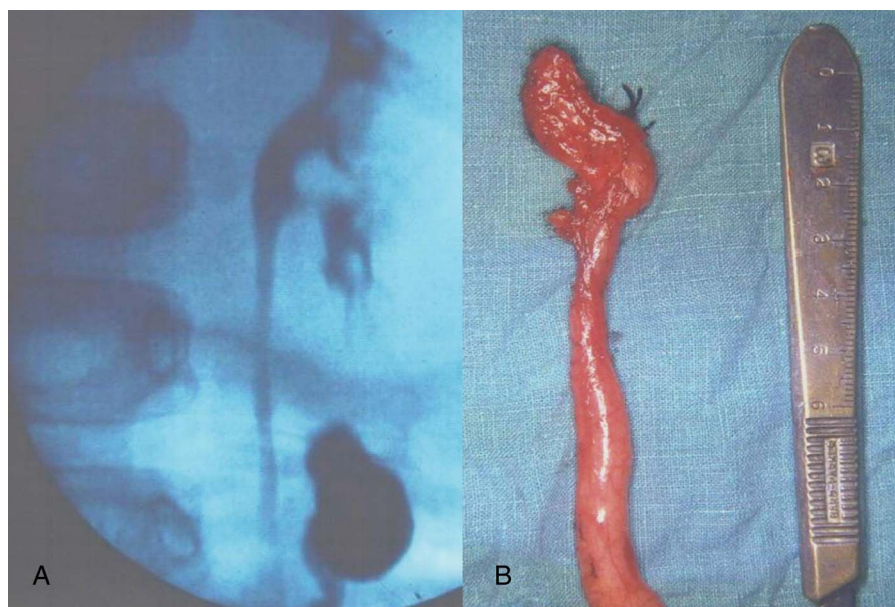


Figure 1 Intravenous urogram showing normal excreting kidneys (A) and cystogram phase showing reflux in supernumerary kidney (B).

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Figure 3 Bulb-ureterogram showing two separate ureters subtending normal and supernumerary kidney (A) and extirpated specimen of supernumerary unit (B).



normal and supernumerary kidney and their respective draining ureters (figure 3A). The non-functioning supernumerary kidney with its refluxing ureter was extirpated (figure 3B). Histologically the excised supernumerary kidney had diffuse dysplastic changes.

TREATMENT

Nephrectomy.

OUTCOME AND FOLLOW-UP

Uneventful. The patient was doing well at follow-up of 2 years.

DISCUSSION

Supernumerary kidney is a rare anomaly with less than 100 cases described in the literature.¹ This can be associated with congenital abnormalities of the urinary tract or extraurinary tract organs.² Most of the times its detection is incidental, though on occasions it may clinically advertise itself with formation of tumours,³ calculi⁴ or hydronephrosis.⁵ Supernumerary kidneys may be diagnosed with IVU, nuclear scintigraphy, USG, CT or MRI.⁶ In non-functioning supernumerary units functional imaging studies may not be able to delineate the parenchyma. IVU performed in this reported case failed to demonstrate any extra renal unit. Small dyplastic supernumerary units placed in orthotropic or ectopic locations may easily escape attention on CT or MRI. One needs to keep high level of suspicion to avoid missing this rare condition. Supernumerary kidney presenting as vesicoureteric reflux is very rare. The management of non-functioning refluxing supernumerary unit is nephrectomy. After extirpation of the refluxing units, resolution of symptoms happens.

Learning points

- ▶ Small dyplastic supernumerary units placed in orthotropic or ectopic locations may easily escape attention on CT or MRI. One needs to keep a high level of suspicion to avoid missing this rare condition.
- ▶ Supernumerary kidney presenting as vesicoureteric reflux is very rare.
- ▶ The management of non-functioning refluxing supernumerary unit is nephrectomy.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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