

PART 1

8-year-old otherwise healthy boy is referred with occasional left-sided flank pain during the last 3 months



PART 1

Q What urological conditions should be suspected?

A hydronephrosis, UTI, stone disease, reflux, obstipation

Q What further history do you need?

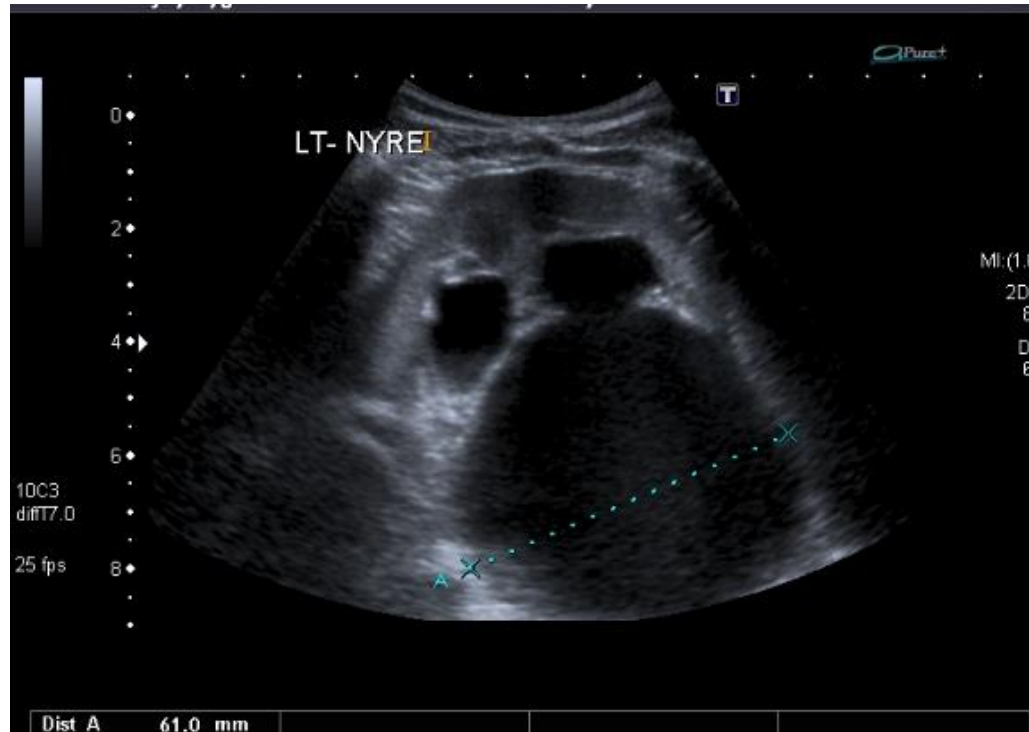
A Relation to fluid intake, voiding function, history of urinary tract infection, bowel function, trauma, haematuria; association with nausea, vomiting

Q What investigations would you recommend to begin with?

A urinary analysis, US



PART 2



This is an ultrasonography of the patient's left kidney. Right kidney is normal



PART 2

Q What does this picture show?

A Hydronephrosis with pelvic and calyceal dilatation with reasonable kidney tissue

Q Is surgical repair appropriate based on a single US?

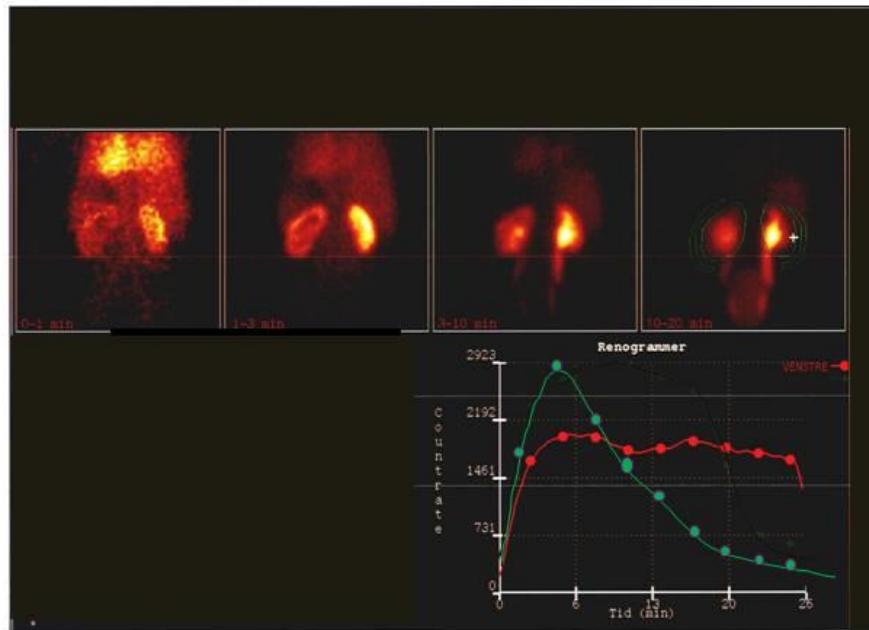
A No

Q What additional test would you recommend?

A Renal nuclear scan is appropriate to assess differential renal function and renal drainage/clearance



PART 3



MAG3 renal scan: differential function on the left side is 38%



PART 3

Q Describe scintigraphy and wash out curve

A The left kidney has a delayed uptake and a wash out curve indicating possible obstruction

Q What are the pitfalls in interpreting renograms in infants and children?

A The scintigraphic phase of a renography in a child, especially in infants, with hydronephrosis can be overestimated due to background activity. It is difficult to draw any conclusion about obstruction based on the wash out curve because of overfilling of the bladder - drainage should be checked after micturition. Renal function can be overestimated in gross hydronephrosis

Q Would you recommend surgical treatment in this case?

A Decreased differential function, a huge dilatation and symptoms indicate surgery



PART 4

The child is taken to the OR



PART 4

Q What are the possible surgical approaches to the UPJ?

A Open surgery using an anterior, lateral or dorsal incision; laparoscopy; and retroperitoneoscopy

Q What are the possible kinds of UPJ obstruction in a patients with hydronephrosis?

A Intrinsic ureteral obstruction, polar vessel, high insertion of the ureter, ureteral valves

Q During laparoscopic surgery an aberrant vessel to the lower kidney pole was found. Which are the possible procedures in such a case?

A Dismembered pyeloplasty

Q What are the major complications that can follow a dismembered pyeloplasty?

A urinary leakage from the anastomosis or recurrent obstruction

