Haematuria

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Background

- Macroscopic haematuria is uncommon - 0.2%. Microscopic haematuria is detected in 0.5-1.6 % of normal children, presence confirmed by repeat testing.
- Need to confirm presence of RBC in urine. Haemoglobinuria, ingested dyes and plant pigments can be misleading.
- Common causes: Urine infection - 50%, Perianal irritation -10%, Trauma-7%, Acute Nephritis - 4%, GU tumours - 0.7%. Stones, coagulopathy and hydronephrosis are rare causes of haematuria in children.

Assessment

History

- Frequency, dysuria, abdominal pain +/- fever suggests UTI.
- H/O trauma.
- Recent sore throat or skin lesions suggestive of streptococcal infection and possibly Glomerulonephritis.
- Pain on micturition, with a few drops of blood at the end of the stream suggests urethral abnormality or meatal ulcer
- Haematuria end of micturition in adolescent boys may represent posterior urethritis.
- Severe colicky loin pain radiating to the groin is suggestive of ureteric colic
- Inherited coagulopathy or familial deafness (Alpert disease).

Clinical Examination

- ➢ Check foreskin and glans for balanitis, meatal ulcer, local trauma
- ➢ Check abdomen for palpable mass (Hydronephrosis, Wilms tumour, neuroblastoma).
- ➢ Look for skin rash suggestive of Henoch-Schonlein purpura
- ➢ Hypertension may be due to chronic glomerulonephritis.

Investigations

Urine microscopy & culture	Granular and cellular casts / persistent proteinuria + red cells – Glomerulonephritis Pyuria and bacteriuria – UTI Crenated and dysmorphic red cells – Atypical focal glomerular lesion Uniform red cells - lesion in urinary tract Sterile pyuria + haematuria - Tuberculous infection
Urine	Protein-creatinine ratio and calcium- creatinine ratio.
Blood tests	**FBC, clotting screen, U&E, LFT, ASOT, C3/C4, immunoglobulins, ANF, anti-DNA antibodies, blood gas**
Plain KUB radiograph	May show stone or renal soft tissue mass
Renal ultrasonography	Necessary in every case

Management

Referral pathways from CED

REFER TO PAEDIATRIC SURGERY / UROLOGY	REFER TO PAEDIATRICS
Trauma	UTI with no prior surgery
Suspected stone (renal/ureteric/bladder)	Suspected glomerulonephritis
Abdominal mass or tenderness	Henoch-Schonlein purpura
Abnormalities of foreskin	Nephritis
ANY SUSPECTED SOLID TUMOUR SHOULD BE REFERRED URGENTLY TO BOTH PAEDIATRIC SURGERY AND ONCOLOGY	