Bloody wee — Haematuria workup and when to refer

Dr Aleks Vujovic
Urologist SJGMPH
Definition

- Macroscopic – visible to the patient
- Microscopic – not visible to naked eye
  - Dipstick: depends on ability of Hb to haemolyse
  - Sens 95%, Spec 75%
  - >3 rbc/hpf
Risk Factors For Malignancy

- Older age
- M > F
- Smoking Hx
- Chemical exposure
- Pelvic Rtx
- Irritative LUTS
- Prior Urol Hx
- Chronic IDC
- Hx Recurrent UTIs
Aetiology of Haematuria

- Glomerular vs Non Glomerular
- Non Glomerular causes:
  - Stones
  - Infections
  - Cancers – RCC, TCC
  - BPH
  - Instrumentation/Stents
  - Benign causes – exercise, IC, trigonitis
Evaluation

- Thorough Hx and Exam
  - RF, associated sx (pain vs painless)
- Formal MC&S
- UE, FBC, Coags, PSA
- Cystoscopy: all pts with macroscopic haematuria and patients ≥35yo with asymptomatic haematuria
  - <35 if risk factors
Evaluation II

- Urine cytology – not for micro unless RF
- CTIVU – For all patients with macroscopic haematuria
  - Microhaematuria >35 and if RF
- Renal US – microhaematuria <35 yo and no RF
Diagnosis, Evaluation and Follow-up of AMH

+AMH
(≥ 3 RBC per HPF on UA with microscopy)

- Repeat UA after treatment of other cause(s)
- History & Physical Assess for other potential AMH causes
  (e.g., infection, menstruation, recent urologic procedures)
- Release from care

- Concurrent nephrologic work up if proteinuria, red cell morphology or other signs indicate nephrologic causes.

- Renal Function Testing
- Cystoscopy
- Imaging (CTU)

- If unable to undergo CTU, less optimal imaging options include:
  - MR Urogram
  - Retrograde pyelograms in combination with non-contrast CT, MRI, or US

- Follow up with at least one UA/micro yearly for at least two years
- Follow persistent MH with annual UA. Consider nephrologic evaluation. Repeat anatomic evaluation within three to five years* or sooner, if clinically indicated.

- Treatment

- Follow up as indicated by diagnosis. Re-evaluate for MH after resolution of identified condition.

- Release from care

*The threshold for re-evaluation should take into account patient risk factors for urological pathological conditions such as malignancy.
Haematuria

Urine microscopy and culture
-ve

CT intravenous pyelogram/ultrasound
Urine cytology

CT intravenous pyelogram/ultrasound
Urine cytology
Referral to urologist

Ureteric or renal stones seen

Urothelial malignancies
Referral to urologist for endoscopic investigation +/- radical surgery

Benign conditions (eg. benign prostatic hypertrophy, strictures)

Manage conservatively unless:
- signs of sepsis
- large renal or ureteric stone
- renal impairment
- persistent or complications

Referral to urologist for endoscopic investigation and treatment

Treat underlying infection
Follow up

- 3-5% with micro will have a malignancy
- 23% with macro will have a malignancy
- If all Ix negative:
  - Annual urinalysis – if 2 consecutive negative, no follow up
  - If persistent: re-evaluate every 3-5 years esp if RF
  - Reinvestigate if macroscopic/LUTS
Thank You!

Uh... when you say “MICROSscopic Hematuria”...does that mean it is just a Little problem?