



# Standard Treatment Workflow (STW)

## GROSS HAEMATURIA

### ICD-11-MF50.40

#### PERFORM THOROUGH CLINICAL EVALUATION



**SYMPTOMS**

- Blood in urine - red coloured or dark coloured
- May be associated with pain:
  - Pain during voiding (urethra)
  - Pain in suprapubic region (bladder)
  - Pain in flank (kidney)
- Acute retention of urine due to clots

**RISK FACTORS**

- Age > 40 years and male gender
- Smoking
- Occupational exposure (Textile, Chemicals, Rubber, Dye, Printing)
- Family History of Genitourinary malignancy
- Personal history of contact with tuberculosis
- History of stone disease
- Recurrent UTI

**EXAMINATION**

- Pulse, blood pressure
- Check for pallor
- Check for anasarca
- Per abdomen examination: Palpable bladder, flank mass
- Digital rectal examination: Enlarged prostate, hard nodular/ smooth surfaced prostate
- Rule out vaginal causes of bleeding

**RED URINE BUT NOT HAEMATURIA**

- Foods: beetroot, blackberry, rhubarb
- Medicines: rifampicin, pyridium

Even single episode of haematuria (irrespective of severity) warrants complete evaluation

**HOW TO INVESTIGATE**

**ESSENTIAL**

- Urine examination - routine, microscopy
- Complete Hemogram
- Kidney function tests (KFT)
- Ultrasonography of kidney urinary bladder and prostate region

**DESIRABLE**

- Contrast enhanced computed tomography of kidney urinary bladder region/ intravenous pyelography (if KFT normal)
- Magnetic resonance imaging of Kidney urinary bladder region (if KFT deranged)
- Urine cytology if > 40yrs or smoker
- Cystoscopy if > 40 years or smoker

**OPTIONAL**

- Urine culture
- Urine for active sediments(if nephrotic/ nephritic syndrome suspected)
- PT/INR (if bleeding disorder suspected)
- Serum prostate specific antigen (if required)
- Urine for acid fast bacilli - 3 samples (if tuberculosis suspected)

#### WHEN TO REFER (WARNING SIGNS)

- Deranged kidney functions
- Suspecting malignancy
- Haematuria with hypertension/ albuminuria
- Persistent severe haematuria

#### HOW TO TREAT

##### PHC/DH (GENERAL)

- Start intravenous fluids if required
- If Anaemia - may transfuse blood as required
- Manage clot colic /flank pain with analgesics
- If Acute urinary retention - catheterise with 20/22Fr 3 way Foley and may start continuous irrigation with normal saline

##### SPECIFIC

- Suspect urinary tract infection : presents with dysuria, increased frequency of voiding and other irritative lower urinary tract symptoms with/ without fever- treat with broad spectrum oral antibiotics

##### TERTIARY CENTER (GENERAL)

- Cystoscopic clot evacuation may be performed if feasible
- If basic evaluation and management facilities are unavailable
- Haematuria should be considered as a symptom of genitourinary malignancy in patients >40years old until proven otherwise**
- Suspected nephrotic/nephritic syndrome: cola coloured urine, proteinuria, anasarca, hypertension - Refer to nephrologist

##### DIFFERENTIAL DIAGNOSIS FOR CHRONIC CONDITIONS LEADING TO HAEMATURIA

	Stones	Renal cell cancer	Bladder tumor	Genito-urinary tuberculosis
Symptoms	Flank pain Ureteric colic Recurrent urinary tract infection Haematuria	Flank mass Flank pain Haematuria	Haematuria Urinary retention	Dysuria Frequency Nocturia Haematuria
Investigations	Ultrasonography Xray KUB Intravenous pyelography or Computed tomography	Ultrasonography Computed tomography/MRI Urine cytology	Ultrasonography Computed tomography/MRI Urine cytology	Urine analysis Urine acid fast bacilli Urine tuberculosis culture CBNAAT (optional) Intravenous pyelography or Computed tomography
Treatment	>5mm or symptomatic - refer to urologist	Mostly surgical treatment - refer to urologist	Mostly surgical treatment - refer to urologist	Oral Antitubercular treatment - 6months, refer to a urologist, close follow up

#### ABBREVIATIONS

**CBNAAT:** Cartridge based Nucleic Acid Amplification test

#### REFERENCES

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**DON'T DELAY, GET EVALUATED FOR GROSS HEMATURIA TODAY**