HAEMATURIA

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Haematuria occurs when there is blood in the urine. This is now classified as visible haematuria (VH) or non-visible haematuria (NVH). Enquiry should be made about the timing of the blood in relation to the urinary stream – initial (urethral pathology), throughout the stream (bladder or upper tracts) or terminal (bladder neck or prostatic pathology) – as well as the degree of haematuria and its frequency . A patient with haematuria should be investigated regardless of whether they are taking anticoagulant therapy . The concern is that the haematuria, especially if painless, may be due to an underlying neoplasm, usually a bladder or renal tumour. Causes of haematuria include trauma (T), infection (I) and neoplasm (N) anywhere in the urinary tract. Haematuria in association with loin pain and a palpable loin mass defines the classic triad of symptoms and signs of a renal tumour, although this triad is seen in less than - 10% of these patients. In countries with endemic tuberculosis (TB) or filarial disease, haematuria is also seen in patients with these genitourinary infections. In genitourinary TB, haema - turia is usually associated with dysuria and frequency due to bladder infection. In patients with filarial involvement of the retroperitoneal lymphatics, haematuria is intermittent, often lasting months or years , and is associated with ‘milky’ or cloudy urine, a condition called chyluria. Haematuria requires detailed investigation in almost all - cases except young women with a proven UTI. In vestigations include an ultrasound scan (USS) of the kidneys–ureters– bladder (KUB) and additional contrast imaging if needed. If no aetiology can be identified on laboratory and imaging studies, cystoscopy is mandatory . Although BPH can cause haematuria in older men, this diagnosis should be considered after exclusion of all other causes. The cancer detection rate depends on the degree of haematuria, being approximately 20% in those patients with VH but very much lower in those with NVH (<5%). - Summary box 81.3 Haematuria /uni25CF /uni25CF /uni25CF

Classi /f_i ed as VH or NVH A list of potential causes for haematuria can be rapidly generated by considering trauma (T), infection (I) and neoplasm (N) anywhere in the urinary tract Haematuria requires detailed investigation in nearly all cases

Many drugs and foodstu ff s have been reported to produce abnormal discoloration of the urine. Most colours have been reported but the most frequently encountered clinically are red/orange and brown. Apart from haematuria, the presence of haem in the urine also produces red discoloration and generates a positive dipstick test. Red urine discoloration due to haemoglobinuria may present in haemolytic disorders such as ‘march haematuria’, classically seen in dehydrated soldiers after prolonged marching. Likewise, myoglobinuria due to myocyte destruction, e.g. caused by rhabdomyolysis after crush injury or compartment syndrome, can also result in red discoloration of the urine. Disordered haem production, seen in porphyria, can result in red discoloration that may change to brown or purple with exposure to sunlight. Several medications can cause red/ orange discoloration of the urine, most commonly rifampicin, isoniazid or phenazopyridine. Others include chlorpromazine, thioridazine, senna and laxatives containing a phenolphthalein component. Consumption of large quantities of beetroot can result in red discoloration of the urine. This

discoloration is due to the excretion of betalain (betacyanin) pigments such as betanin. The commonly used antibiotics nitrofurantoin and metronidazole can lead to brown urine. Brown urine due to high levels of circulating bilirubin is a feature of obstructive jaundice.

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