

Ureteric Colic

Relatively common: ~10% of men will have a stone by age 70 (may be asymptomatic). Male:Female ratio 3:1, with peak incidence in 20-50 age group. Found in all groups, but more common in caucasians/asians, hot climates, and sedentary lifestyle. Genetic factors are a risk for some stone types.

Most stones are radio-opaque (calcium oxalate (80%), mixed oxalate/phosphate (10%)), but a significant minority are relatively radiolucent (Urate (5-10%), various others).

Generally asymptomatic in the renal pelvis, cause pain in the ureters (hence ureteric, not renal, colic). Typically described as severe pain in loin, may radiate to groin on affected side. Physical examination is often unremarkable.

Initial investigation should include urine dip, U+E/Ca²⁺/Urate/FBC, KUB, and an open mind – many other pathologies have similar presentations, and none of the initial tests are diagnostic (Plain film X-rays are projections, and do not localise a calcification in 3D-space). The need for resuscitation should always be considered and should prompt a search for another problem as ureteric colic does not cause haemodynamic instability. Stones are best demonstrated by CT, but IVU and USS may be adequate and more available.

>90% of stones <4mm will pass spontaneously. Those 4-7mm have 50% chance, those >7mm seldom will do so. In most cases surgical intervention is not required urgently, but patients should not get lost – soft indication for admission overnight to ensure follow up. Younger patients may be better served by surgical treatment to permit earlier return to normal function (airline pilots may not fly with a known calculus).

Analgesic of choice is high dose of NSAID – e.g. 100mg PR Diclofenac, with additional paracetamol/opiates if required.

Indications for admission are evidence of new renal failure, evidence of UTI or pyrexia (will require urgent nephrostomy if not rapidly resolving), patients with a single functioning kidney, inadequate pain control, and need for other inpatient investigation. Larger stones are a relative indication to ensure adequate follow up.

Treatment may comprise observation, treatment with Tamsulosin (unlicensed use), stent insertion, Extracorporeal Shockwave Lithotripsy (ESWL), ureteroscopy with mechanical or laser fragmentation or direct removal, percutaneous nephrolithotomy, or open surgery.