AKI Care Bundle

Institute in all patients with a 1.5 X rise in creatinine or oliguria (<0.5mls/kg/hr) for >6 hours

This is a Medical Emergency

Full set of physiological observations
Assess for signs of shock/hypoperfusion
If MEWS triggering give oxygen, begin resuscitation and contact critical care outreach team

Fluid therapy in AKI

Assess heart rate, blood pressure, jugular venous pressure, capillary refill (should be <3 secs), conscious level.
If hypovolaemic give bolus fluids (e.g. 250-500mls) until volume replete with regular review of response.
Middle grade review if >2 litres filling in oliguria.
If the patient is euvolaemic give maintenenance fluids (estimated output plus 500mls) and set daily fluid target.

Monitoring in AKI

Do arterial blood gas and lactate if venous bicarbonate is low or evidence of severe sepsis or hypoperfusion.
Consider insertion of urinary catheter and measurement of hourly urine volumes.
Measure urea, creatinine, bone, other electrolytes and venous bicarbonate at least daily while creatinine rising.
Measure daily weights, keep a fluid chart and perform a minimum of 4 hourly observations.
Perform regular fluid assessments and check for signs of uraemia.

Investigation of AKI

Investigate the cause of all AKI unless multi-organ failure or obvious precipitant
Urine dipstick. If proteinuria is present perform urgent spot urine protein creatinine ratio (PCR).
USS should be performed within 24 hours unless AKI cause is obvious or AKI is recovering or within 6 hours if obstruction with infection (pyonephrosis) is suspected.
Check liver function (hepatorenal), CRP and CK (rhabdomyolysis). If platelets low do blood film/LDH/Bili/retics (HUS/TTP). If PCR high, consider urgent Bence Jones protein & serum free light chains.

Supportive AKI care

Treat sepsis - in severe sepsis intravenous antibiotics should be administered within 1 hour of recognition.
Stop NSAID/ACE/ARB/metformin/K-sparing diuretics and review all drug dosages.
Give proton pump inhibitor and perform dietetic assessment.
Stop anti-hypertensives if relative hypotension. If hypovolaemic consider stopping diuretics.
Avoid radiological contrast if possible. If given follow prophylaxis protocol.

Causes Think 'STOP AKI'

Sepsis and hypoperfusion, **T**oxicity (drugs/contrast), **O**bstruction, **P**arenchymal kidney disease (acute GN)

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