

## AKI RISK ASSESSMENT

### Background Factors

- CKD (eGFR <60mL/min)
- Age >65 yr
- Co-morbidity (IHD, CCF, DM)

### Acute Context

- Sepsis
- Peri-operative period

### Illness Severity

- Hypovolaemia
- Systolic BP <110mmHg
- Deteriorating NEWS

### Medication Use

- NSAID, COX II, ACEi, ARB
- Aminoglycoside
- Iodinated Radiocontrast

≥ 2 Risk factors  
**'AKI AT RISK'**

Daily U&E  
Accurate Urine Output record  
Close attention to fluid balance

## ESTABLISHED AKI

**DEFN:** sCreatinine rise >26umol/L in 48hrs, >50% from baseline value within 7 days, UO < 30mL/hr for 6hrs

### INVESTIGATE URGENTLY

**LABS** – U&E, FBP, CRP, LFT, Glucose, Bone profile, Coagulation Screen  
Urine dipstix analysis, *Urine Na*

### RENAL ULTRASOUND

- Within 6hrs if upper tract obstruction considered
- Within 24hrs if AKI not responding to treatment

### SELECTED CASES -

- Nephritis - ANCA, Anti-GBM
- HCO<sub>3</sub> <19mmol/L - ABG
- Rhabdomyolysis – CK
- SBP <110mmHg - Lactate

### RESTORE KIDNEY PERFUSION

#### OPTIMISE VOLUME

- Bolus 250-500mL crystalloid targeting SBP >110mmHg/ clinical evidence of euvoalaemia
- 2L max IV fluids within 2hr
- **After each bolus** check for signs of fluid overload
- Seek senior help before repeating 2L fluid challenge

#### OPTIMISE BLOOD PRESSURE

If despite adequate volume challenge hypotension persists (SBP <110 +/or MAP <65mmHg) obtain a urgent senior review

Consideration should be given to HDU/ICU referral

### PRESCRIBE SAFELY

**STOP** NSAIDs, COX II, ACEi, ARBs  
Metformin

**AVOID WHEN SBP <120mmHg**  
Antihypertensives, Diuretics

**CORRECT** dosing to GFR level (e.g. aminoglycosides, metformin and sulphonylureas, LMWH and many antibiotics)

#### IV FLUID PRESCRIBING -

**MAINTENANCE FLUIDS**  
RATE = Urine Output + 30mL/hr

**BOLUS FLUIDS**  
**AVOID** Hartmann's if K >5.5mmol/L

## INDICATIONS FOR REFERRAL TO NEPHROLOGY

### Suspected intrinsic renal disease

- Blood and Protein on urinalysis with suspicion of glomerulonephritis
- Unclear aetiology of AKI (no pre-renal or obstructive cause identified)

### Potential need for renal replacement therapy (dialysis)

- Refractory hyperkalaemia (>6.5mmol/L) or pulmonary oedema
- Severe metabolic acidosis (HCO<sub>3</sub> < 15mmol/L)
- Progressive AKI (creatinine >300umol/L or rise >100umol/L in 24hr)

### AKI occurring in

- Renal transplant patients
- Patients with baseline GFR <30mL/min