Summary Guideline for Acute Kidney Injury (AKI)

Acute Kidney Injury (AKI) Guideline

**Acute Kidney Injury diagnosed if any of:**
1. Increase of creatinine >1.5x baseline*, or increase in creatinine >26μmol within previous 48 hrs, or
2. Urine output <0.5ml/kg/hr for 6 hours (eg 70kg <35ml/hr)
   *If no baseline use normal range

**RCHT AKI Bundle is available**

**Assess and treat hyperkalaemia according to RCHT protocol**

**Review by Medical Team:**
Careful examination and complete history Inc- NEWS, Drug History, AKI checklist. Check bloods Inc Ca PO4, CRP, bicarb, coag, LFTs

**Ensure adequate hydration**

**Senior Medical review/ITU outreach as per NEWS protocol**

**Refer to Renal Immediately if:**
Serum Creatinine Increase by 3x from baseline or if creat >350 μmol/L

**Review Patient**
2 hrs later or earlier if high risk assessment or NEWS worsening. Ensure adequate hydration Repeat bloods at least within next 24 hrs

**AKI Checklist**
1. Increase frequency of observations — minimum of every 30 mins for at least 2 hrs
2. Review common correctable factors- dehydration, drugs (ACEI, NSAID), sepsis, consider drug doses
3. Dipstick urine. Msu. Consider bld cultures
4. Monitor urine output – consider urinary catheter
5. Majority of cases prerenal but consider intrinsic/post renal cause
6. Arrange Renal US and consider Additional Tests (below)

**Additional Tests**
- Immunology- ANCA, ANA, complement, anti GBM.
- Immunoglobulins, Blood film, LDH, Creatinine kinase.

**AKI STAGE**

<table>
<thead>
<tr>
<th>AKI STAGE</th>
<th>Serum Creatinine criteria</th>
<th>Urine output criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Scr ≥ 150-200% (1.5-2 fold) from baseline, or Scr ≥ 26 μmol/l in prev 48 hrs</td>
<td>&lt;0.5 ml/kg/hr for &gt;6 hr</td>
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<tr>
<td>2</td>
<td>Scr &gt; 200 – 300% (&gt;2-3 fold) from baseline</td>
<td>&lt;0.5 ml/kg/hr for &gt;12 hr</td>
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<tr>
<td>3</td>
<td>Scr &gt; 500% (&gt;3 fold) from baseline or Scr ≥354 μmol/l with an acute rise of 2.44 μmol/l in ≤24 hr or initiated on RRT</td>
<td>&lt;0.8 ml/kg/hr for 24 hr or mortality for 12 hr</td>
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</tbody>
</table>

This is a basic guideline only! If ongoing concerns re diagnosis or management please refer renal Registrar (9-5) or Consultant via switchboard

Acute Kidney Injury Network classification, Critical Care 2007
11:53
Definition assumes adequate rehydration
RRT = Renal Replacement Therapy

Version 21.2.17
The AKI Bundle (referred to in the above guidance) is attached below for information. These exist in printed form in admitting areas.

![AKI IS A MEDICAL EMERGENCY Table]

**Common causes**
- Pre-renal (e.g. sepsis, hypotension)
- Post-renal (e.g. bladder outflow obstruction)
- Treat the cause promptly

**Medication**
- Consider stopping ACE inhibitor, metformin, NSAIDS, diuretics, opiates
- Make necessary dose adjustments for AKI

**Fluids**
- Assess volume status
- When did the patient last pass urine?
- Fluids: resuscitation, replacement, or maintenance

**Review**
- When and where will the next U&Es be taken?
- Has treatment improved the patient’s NEWS score and their condition?
- Handover
- Consider Renal referral for suspected intrinsic renal causes and AKI Stage 3

RCHT intranet guidelines are available to help further guide the management of AKI, hyperkalaemia, and avoiding contrast induced nephrotoxicity.