

An approach to the unwell kidney transplant patient

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In this medical podcast, James talks to Dr Erin Vaughan about an approach to the unwell kidney transplant patient who requires a clinical review on the wards.

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About Dr Erin Vaughan

Erin Vaughan is a second-year Advanced Trainee in Nephrology at [Royal Prince Alfred Hospital](#). She completed her Basic Physician Training at Royal Prince Alfred Hospital and internship and residency at [Royal North Shore Hospital](#). Erin's interests include general [nephrology](#), dialysis and transplantation, [junior doctor education and wellbeing](#).

An approach to the unwell kidney transplant patient

With Dr Erin Vaughan, Renal Advanced Trainee, Royal Prince Alfred Hospital, Sydney, Australia.

Case

You have been called on the phone by a nurse to review a 50-year-old renal transplant patient with a fever of 38.6°C and a blood pressure of 95/60mmHg. The patient feels generally unwell.

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1. Initial questions over the phone

- Full panel of vital signs as a triage tool.
- Brief patient history to form a list of differentials, such as presenting symptoms, background, medications.

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2. How would you prioritise this in your list of tasks?

- This should be a clinical review call, to be seen within 30 minutes – but practically as soon as possible.

3. Outline your assessment

- **History**

- Focused history to determine the source of infection, followed by a systems review.
- Consider common infections (respiratory, urinary, gastrointestinal symptoms), as well as rare and atypical infections.
 - Urinary symptoms: haematuria, dysuria, frequency, abdominal tenderness
 - Respiratory symptoms: viral or bacterial
 - Gastrointestinal: diarrhoea, abdominal pain
 - Systemic symptoms: fever, chills, rigors, muscle aches
- Duration of symptoms.
- Are they still making urine? - Acute kidney injury in a transplant patient is an emergency.
- Previous infections and the microbiology results.
- Transplant history: timing of transplant, immunosuppressant and medication compliance (orange card with up-to-date immunosuppressants), history of rejection.
- Other background history: other causes of immunosuppression such as diabetes, other medications with potential side effects, travel history and sick contacts, vaccination history.

- **Examination**

- Renal transplant patients with a temperature of $>37.2^{\circ}\text{C}$ warrant a clinical review -these patients can present with subtle and atypical infections and deteriorate quickly
- Regular observations - monitor the trend
- Infection source; foreign bodies (urinary catheters, drains, dialysis catheters)and skin infections
- Fluid assessment
- Blood pressure
- Trending weight and urine output
- Systems review, especially palpate over the graft and auscultate for renal bruit

4. What are the other differentials for a transplant patient with fever who feels generally unwell?

- Infection until proven otherwise.
- Other differentials of fever in a transplant patient include thromboembolism, rejection and malignancy.

5. Investigations

- Full septic screen: blood cultures at two different sites and exit sites, urine cultures, viral swabs, sputum cultures, stool cultures, chest X-ray.
- Further investigations are guided by the history and examination.
- Medication levels and think about drug interactions.

6. Management

- Involve senior colleagues early - transplant patients are unwell and can deteriorate quickly.
- Ensure the patient is stable.
- Start fluid resuscitation, monitor urine output, start broad-spectrum antibiotics early, e.g. Tazocin.
 - If there is a focal source of infection, target that.
- Remember to adjust the dosage for renal impairment.

7. Other considerations?

- Consider risk of opportunistic infections, such as prophylactic for Pneumocystis Jiroveci pneumonia.
- Cover for atypical infections, after consulting the renal and/or infectious disease teams.
- Source control.
- If the patient is still deteriorating after fluid resuscitation and antibiotics, they need escalation for ICU/HDU review - overwhelming sepsis can require inotrope support.
- Watch for low BP and increasing HR despite IVF, as well as for decreased level of consciousness.
- Serial VBGs are useful for monitoring lactate, a marker for perfusion, as well as for electrolyte derangements in the context of renal impairments.

Take home messages

- Fever in a transplant patient is an infection until proven otherwise.
- Dose-adjust medications.
- Review medication list and withhold nephrotoxic medications.
- Transplant patients can deteriorate very quickly - ask for help early.

Related Podcasts

- [Approach to a dialysis patient](#)
- [Stress Steroids](#)

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