



Safety Alert 008/11

19 December 2011

Pneumocystis jirovecii Pneumonia (PJP) in transplant patients

Distributed to:

- Chief Executives
- Directors of Clinical Governance

Action required by:

- Chief Executives
- Directors of Clinical Governance

For response by:

- Directors of Clinical Governance

We recommend you also inform:

- Directors of Transplant Units
- Directors of Pathology Services
- Directors of Intensive Care
- Directors of Medical Services
- Medical staff
- Nurses

Deadline for completion of action

22 December 2011

Clinical Excellence Commission

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Background

Pneumocystis jirovecii (previously known as *Pneumocystis carinii*) pneumonia (PJP) is an opportunistic fungal infection in patients with impaired immunity, causing acute breathlessness, dry cough and progressive respiratory failure. Routine anti-*Pneumocystis* prophylaxis has largely eliminated PJP in HIV/AIDS patients and in the first six months post-organ transplantation period.

Specific incident

An outbreak of PJP in renal transplant patients occurred in a major tertiary hospital with subsequent similar outbreaks in two other Sydney hospitals.

The behaviour of *P. jirovecii* appears to have changed in recent outbreaks occurring late after transplantation in kidney recipients. Transmission is most likely as a result of person-to-person spread via the droplet route. Patients at higher risk include those with chronic pulmonary disease, previous CMV infection, and transplant dysfunction. Hence, unlike previous cases of PJP recent hospital acquired cases have affected patients who are immunologically stable and who have ceased prophylaxis against *Pneumocystis*.

It is unclear if other immunocompromised patients are vulnerable to similar case clusters.

Overseas outbreaks

Recent outbreaks of PJP have been reported at hospitals in UK, Japan, Switzerland and The Netherlands, with possible person-to-person spread of *P. jirovecii*.

Suggested actions for Local Health Districts/Networks

- Early recognition of PJP clusters (defined as two PJP patients within one month).
- Prompt intervention after cluster confirmed with anti-*Pneumocystis* prophylaxis for all asymptomatic exposed patients and patients with significant risk factors for PJP ie. previous lung disease, CMV infection and transplant dysfunction.
- Consider PJP in immunocompromised patients with significant respiratory symptoms and perform appropriate investigations for causes of pneumonia.
- Transplant inpatients with significant respiratory symptoms should be placed on droplet precautions. For all other immunocompromised patients with cough encourage respiratory etiquette.

References

- Phipps LM, Chen SCA, Kable K, et al. Nosocomial *Pneumocystis jirovecii* Pneumonia: Lessons From a Cluster in Kidney Transplant Recipients. Transplantation December 27 2011;92(12):1327-1334.
- McCaughan JA, Courtney AE. Pneumocystis jirovecii pneumonia in renal transplantation: time to review our practices? Nephrol Dial Transplant 2011;0:1-3.

Action required by Local Health Districts/Networks

1. Ensure this Safety Alert is distributed to all relevant stakeholders.
2. Transplant units to assess patients for antibiotic prophylaxis for PJP.