

Invasive Aspergillosis Factsheet

Information for Staff

Construction Associated Nosocomial Invasive Aspergillosis

Certain types of demolition and construction activities can result in an increased risk of invasive Aspergillosis among immunosuppressed patients.

Introduction

- *Aspergillus* species are spore forming fungi that commonly occur in soil, water, organically enriched debris, decaying vegetation and within the fabric of buildings.
- Many species of *Aspergillus* have been recognised in nature, but only a few have been associated with human disease, particularly *A. fumigatus*, *A. flavus*, *A. niger*, *A. terreus* and *A. nidulans*.
- Most people are immune to infection and *Aspergillus* rarely poses a threat to healthy people. It is however, recognised as a potential cause of severe illness and mortality in highly immunocompromised patients.
- *Aspergillus* spp. are responsible for a wide spectrum of human illnesses ranging from colonization of the bronchial tree to more widespread disease in people receiving immunosuppressive or cytotoxic therapy, transplant recipients, patients with HIV infection and people with granulomatous disease who are those at increased risk of developing *Aspergillus* infection.

Incubation Period

- From a few days to a few months

Common Clinical Presentations

- Pneumonia.
- Acute *Aspergillus* sinusitis
- In less than half of immunocompromised people with *Aspergillus* infection, other parts of the body may be affected such as the kidney, brain, liver, eyes or skin.

Acquisition

- Healthy people commonly inhale *Aspergillus* spores from environmental sources without becoming sick.
- The concentration of *Aspergillus* in the air commonly increases during construction works.
- Immunocompromised people are at risk of illness but *Aspergillus* is not spread person to person.

Prevention and control

Contractor:

- Environmental control measures to minimise the risk of *Aspergillus* spores being dispersed into the air will be put in place by the contractor during demolition/construction/refurbishment activities.

Patients:

- Patients accommodated in the nearby areas require a risk assessment to identify whether they fall into any of the risk groups overleaf, prior to the demolition/construction/refurbishment work commencing
- Whilst the construction work is in progress, this risk assessment must be carried out for all patients on admission to hospital or their attendance at outpatient appointments
- Those identified as being in risk group 2 or 3 and who are adjacent or near the refurbishment/demolition area should be moved to another ward well away from the construction site
- Those identified as being in risk group 4 should be nursed in a HEPA filtered positive pressure room during the neutropenic period. (treating physician to advise on accommodation in facilities that do not have HEPA filtered positive pressure rooms)
- All new admissions to areas near to the demolition/ construction/ refurbishment sites should be risk assessed against the risk groups below.

Staff:

- Unauthorised staff, patients and visitors **must not** enter construction areas
- All staff must be vigilant and report the spread of construction dust into adjacent patient areas to their line manager
- ISLHD staff members who identify themselves as being at risk should discuss their circumstances with their manager and seek advice from their treating clinician

A high index of suspicion for the diagnosis of Aspergillosis should be maintained for those persons identified as being at risk (Groups 2-4) and surveillance through clinical and microbiological/histological specimen reviews.

Risk groups

Group 1 - No evidence of risk

- Staff members, Service Providers and Contractors.
- All patients not listed in Groups 2 - 4 below.

Group 2 - Increased risk

- Patients on prolonged courses of high dose steroids particularly those hospitalised for prolonged periods.
- Severely immuno-suppressed HIV / AIDS patients.
- Patients undergoing mechanical ventilation.
- Patients having chemotherapy who are not neutropenic.*
- Dialysis patients.

**Neutropenia defined as absolute neutrophil count (ANC), $<1 \times 10^9/l$*

Group 3 - High risk

- Neutropenia for less than 14 days following chemotherapy.
- Solid organ transplantation.
- Chronic Granulomatous Disease of Childhood (CGDC).
- Neonates in intensive care units (ICU).

Group 4 - Very high risk

- Allogeneic bone marrow transplantation:
 - during the neutropenic period
 - with graft versus host disease.
- Autologous peripheral blood stem cell transplantation, i.e. during the neutropenic period.
- Children with severe combined immuno-deficiency syndrome (SCIDS).
- Prolonged neutropenia for greater than 14 days following chemotherapy or immunosuppressive therapy
- e.g. acute myeloid leukaemia (AML), acute lymphoblastic leukaemia (ALL), Burkitt lymphoma, lymphoblastic lymphoma, primary CNS lymphoma
- Aplastic anaemia patients.

Further information

Infection Management and Control Service contact details:

Office hours:

IMACS office – 4222 5898

TWH – 4222 5898 or page: 182

SDMH – 4423 9318

SHH – 4295 2416 or page: 344

CDH, Bulli, PKH and Community Health – via 4222 5898

For urgent out of hours advice contact The Wollongong Hospital Switchboard and ask to be connected to the IMACS Nurse Manager.

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