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Outbreak of invasive aspergillosis among immunocompromised patients in a conventional gastroenterology unit during hospital construction works

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Introduction: Numerous nosocomial outbreak of invasive aspergillosis (IA) have been described in high risk units (haematology units, ICU, transplantation units). *Aspergillus* transmission often occurs during hospital construction works and preventive measures are applied in these units according to national guidelines. We report an outbreak of IA among immunocompromised patients in a conventional gastroenterology unit during hospital construction works.

Methods: From November 2012 to December 2012, 4 cases of proven or probable AI were identified in a conventional gastroenterology unit. Proven or probable IA was defined according to the EORTC/MSG criteria.

Results: All cases occurred in the same unit over a single 21-days period. The first case occurred on December 3 and the last on December 31. All patients had host risk factors: two patients underwent liver transplant and three have received high dose of corticosteroids for more than 3 weeks.

We observed 2 proven and 2 probable IA. Three cases were pulmonary infections, one was a spondylodiscitis. *Aspergillus fumigatus* was identified for three patients, the remaining case presented a positive galactomanan antigen and 1-3 beta D glucan in serum. Voriconazole alone was the main first line therapy for 3 patients, an association with caspofungin was proposed for one patient. Three patients died.

The outbreak investigations identified a parking construction works in front of the gastroenterology unit between November 26 and December 9. Windows and central corridor of the unit were opened daily. However, volumetric air rooms samples did not reveal an unusual fungal growth (3 to 7 spores/sample).

Surveillance of immunocompromised patients hospitalized in this unit was performed with monitoring galactomanan antigen and 1-3 beta D glucan dosage in serum twice a week for 3 months. No additional IA occurred in this unit.

Conclusions: Nosocomial outbreak of IA can occur in low risk units during construction works. Units should be informed of increased risk for IA in immunocompromised patients during these periods. This observation underlines the major role of a correct communication between the infection control team and the hospital management in charge of construction to correctly evaluate infection risks.