**1. Introduction**

Edouard Herriot Hospital, located in an urban area and composed of 32 blocks (France) is involved in a large modernization program which consisted in the demolition of an entire central medical block.

Invasive aspergillosis (IA) due to *A. fumigatus* has been associated with building construction, which may increase spores emission and resuspension nearby immunocompromised patients.

Limited data are available on epidemiology and prevalence of azole resistance in French clinical and environmental *A. fumigatus* isolates.

**OBJECTIVES:**

Evaluate the antifungal susceptibilities of *A. fumigatus* isolates recovered from air samples collected in a French University hospital, which has undergoing major deconstruction works over a one year-period.

**Environmental survey of fungal loads:**

- **Air sampling**
  - Symbol
  - 4 Intensive Care Units (ICUs)
  - 1 Kidney and pancreas transplantation (KLT)
  - 3 Medical units (MU)
  - Outdoor site

**2. Method**

- Research of IA risk factors (EORTC criteria)
- Evaluate the antifungal susceptibilities of *A. fumigatus* clinical and environmental isolates
- Microscopic identification
- b-tubulin sequencing
- Medication database
- Clinical monitoring
- Incubation 37 °C 48h
- Microscopic identification

**3. Results**

- 3885 air samples → 3073 colonies of *A. fumigatus*
- A maximum of 4 colonies per day were conserved and molecularly identified.

**Moderate resistance:**

- Environmental isolates
- Sampled outdoor 231
- Sampled indoor 157

**Initial resistance:**

- Clinical isolates 12

**Minimum Inhibitory concentration ranges values obtained by testing the susceptibility of *A. fumigatus* isolates to AMB, ITZ and VCZ**

- MICs ranges (µg/mL)
  - ITZ
  - VCZ
  - AMB

- No MICs values of antifungals ≤ 1
- For VCZ, clinical isolates have higher MICs mean values than environmental isolates (p=0.08)
- For ITZ & AMB, no differences of MICs between environmental & clinical isolates (p=0.1)
- No # of antifungal MICs means between indoor & outdoor environmental isolates for ITZ (p>0.06), VCZ (p>0.28), AMB (p=0.1)

**4. Discussion**

- No resistant reservoir of Environmental and clinical *A. fumigatus* isolates was observed at our hospital during major deconstruction works (no high MICs value of azoles or AMB).
- However, to respond to the increased risk for patient to be infected by strains already resistant to azoles, a regular assessment ofazole-resistant in environmental ecology strains of *A. fumigatus* could be useful. Further studies with larger number of *A. fumigatus* clinical and environmental isolates from agriculture and healthcare establishments are needed to better appreciate occurrence and prevalence of azole resistance.