

18TH SYMPOSIUM ON INFECTIONS IN THE IMMUNOCOMPROMISED HOST; BERLIN, GERMANY, 15–17 JUNE 2014

Echinocandins lower risk of invasive fungal infections in liver transplant patients

Anidulafungin is more efficacious than fluconazole when used as antifungal prophylaxis in high-risk liver transplant recipients. This is the conclusion of the first randomized, double-blind study to investigate the efficacy of echinocandins in preventing invasive fungal infections in solid-organ transplant patients.

The multicentre study from the USA included 200 patients, who were randomized (1:1) to receive either anidulafungin 200 mg intravenous loading dose followed by 100 mg intravenous daily, or fluconazole 400 mg intravenous daily for a maximum of 6 weeks after their liver transplant surgery.

All patients were aged ≥ 18 years and had one or more invasive fungal infection risk factors, including re-transplant, fulminant hepatic failure, pre-

transplant corticosteroids or intensive care unit care >48 hours or *Candida* colonization at two or more sites.

The incidence of invasive fungal infections within 90 days of transplantation was similar for anidulafungin and fluconazole (5% vs 8.1%; odds ratio = 0.611, 95% confidence interval = 0.19–1.94). However, in higher-risk patients (Model for End-stage Liver Disease [MELD] score ≥ 30 or requiring renal replacement therapy), treatment with anidulafungin resulted in significantly fewer breakthrough invasive fungal infections ($P=0.013$) and a trend towards higher fungal-free survival ($P=0.09$). The two drugs were equally efficacious in patients with MELD score <30 .

In the overall patient population, prophylaxis with anidulafungin was associated with a

lower incidence of *Aspergillus* colonization or infection (3% vs 9% for fluconazole, $P=0.08$) and of breakthrough invasive fungal infections in patients given pre-transplant fluconazole (0% vs 27%, $P=0.07$). In the anidulafungin group there were also fewer cases of documented antifungal resistance (no cases vs five cases). Both drugs were well tolerated.

The investigators recommend that prophylaxis with anidulafungin should be considered in liver transplant recipients with a MELD score ≥ 30 , who are at a high risk of *Aspergillus* infection or who have previously received fluconazole.

Sue Lyon

Winston D (2014) Randomized, double-blind trial of anidulafungin versus fluconazole for prophylaxis of invasive fungal infections in high-risk liver transplant recipients. Presented at ICHS 2014: P25

High risk of death from emerging invasive fungal infections

About half of patients with an invasive infection caused by an emerging fungus are likely to die with or because of their infection, according to the latest report from the FungiScope registry (www.fungiscope.net).

In 373 patients enrolled between January 2003 and March 2014, *Mucorales* conferred the highest risk of all-cause mortality and invasive fungal infection-related death at 60% and 46% respectively. Risks of all-cause mortality and invasive fungal infection-related death were similar for *Fusarium* (53% and 55% respectively) and yeasts (55% and 41% respectively). Patients with invasive fungal infection caused by *Dematiaceae* were at much lower risk: all-cause mortality was 8% and invasive fungal infection-related mortality was 3%.

Chemotherapy, followed by haematopoietic stem-cell transplantation and intensive care unit stay, were the leading risk factors for invasive fungal infection caused by *Mucorales*, *Fusarium* spp and yeasts. Diabetes and chronic renal disease were the most important risk factors for *Dematiaceae*.

Sue Lyon

Wahlers K et al (2014) FungiScope—a global database for emerging fungal infections. Presented at ICHS 2014: P47

Low rates of vaccination in transplant patients

A systematic approach to vaccination is needed to protect patients undergoing solid-organ transplant, concludes a Swiss study.

In January 2014 a vaccination consultation was introduced at the University Hospital of Geneva. This work-up includes vaccination history from the Swiss national electronic immunisation registry and serology against vaccine preventable infections at both listing and grafting.

The study included 43 patients: 22 candidates for

organ transplantation (73% liver) and 21 recipients (mostly kidney or liver). Most were serologically immune to measles, rubella and varicella.

Although 67% of patients had been previously infected with hepatitis A, no uninfected patient had been vaccinated. Fewer patients had been infected with hepatitis B (25% candidates and 1% recipients), and vaccination rates were also suboptimal (25% candidates and 40% recipients).

The low rates were unlikely to be the result of vaccine

refusal, since 80% of candidates readily accepted an immunisation catch-up plan at listing. The researchers conclude that, while the patients' GPs might have been partly responsible for suboptimal vaccination rates in at-risk patients, specialists were also at fault in not reinforcing their own guidelines on pre-transplant immunisation.

Sue Lyon

Enriquez N et al (2014) Vaccine prevention in solid organ transplantation (SOT) candidates and recipients: a systematic approach is needed. Presented at ICHS 2014: P36