Posaconazole therapy for severe abdominal candidiasis: a case report

Angela M. Tobón1, Ana L. Correa2, Myrtha Arango1,3, Catalina de Bedout1 & Angela Restrepo1

1Grupo de Micología Médica y Experimental, Corporación para Investigaciones Biológicas (CIB); 2Depto. de Medicina Interna, Sección de Infecciosas, Hospital Pablo Tobón Uribe (HPTU); 3Facultad de Medicina, Universidad de Antioquia, Medellín, Colombia

Summary
We report the successful treatment of a fluconazole-resistant intra-abdominal Candida infection (Candida albicans and Candida tropicalis) with posaconazole (SCH56592) in a 68-year-old woman with a recent history of intra-abdominal surgery.

Key words: Candidiasis, Candida albicans, Candida tropicalis, Human, SCH56592, Posaconazole, Fluconazole

Tratamiento de un caso de candidiasis abdominal severa con posaconazol

Resumen
Se informa el tratamiento exitoso con posaconazol (SCH56592) de un episodio de candidiasis intraabdominal severa causada por Candida albicans (y Candida tropicalis) resistente al fluconazol en una mujer de 68 años con historia de cirugía intra-abdominal reciente.

Palabras clave: Candidiasis, Paciente, Candida albicans, Candida tropicalis, SCH56592, Posaconazol, Fluconazol

An increase in the incidence of nosocomial Candida infections was first noted in the 1980s, particularly in surgical patients but also in other high-risk patient populations [6,13]. Although more recent data suggest that the overall incidence of hospital-acquired Candida infections is decreasing, it appears that infections caused by non-albicans species of Candida are now on the rise [1,7,15]. This shift has been partly attributed to increased therapeutic and prophylactic use of fluconazole [7,15].

Although amphotericin B and fluconazole constituted the foundation of antifungal therapy in patients with Candida albicans infections in the past, growing reports of resistance to these drugs among non-albicans species of Candida indicate a need for additional effective antifungal therapies [7].

Candida tropicalis is one of the more common non-albicans species identified, accounting for up to 25% of all Candida isolates (range: 4-25%) and up to 45% of non-albicans isolates from blood (range: 20-45%) [7]. Specifically, in Latin America, the percentage of bloodstream infections caused by C. tropicalis has increased; in the SENTRY Antimicrobial Surveillance Program, the percentage increased from 11.9 to 20% from 1997 to 1998 [9].

C. tropicalis is the third most common Candida species isolated from patients in Colombia, Ecuador, and Venezuela; approximately 5% of these isolates are resistant to fluconazole [5]. Although fluconazole resistance is more commonly observed in other non-albicans species, such as Candida glabrata and Candida krusei [3], the resistance of C. tropicalis to amphotericin B and fluconazole is increasing [1,3-5,12-14]. Additionally, poor clinical outcomes appear to be associated with greater fluconazole minimum inhibitory concentrations (MICs) (>16 µg/ml) [3].

We report the successful treatment of severe abdominal candidiasis with posaconazole in a woman after fluconazole therapy had failed.

Case report

A 68-year-old, 47-kg woman was admitted to a local hospital for surgical resection of a giant benign hepatic cyst (December 2001) with removal of liver segments 2, 3 and 4 and her gall bladder. Four days after surgery, the patient had upper digestive tract hemorrhaging and vomiting; endoscopic exploration of the upper digestive tract performed the following day confirmed Mallory-Weiss syndrome. Ascites was documented by ultrasound six days after surgery.

Eleven days after surgery, the patient had abdominal distension, diarrhea, and lower limb edema; two days later, her temperature spiked to 39.5 °C. Subsequent blood cultures were positive for Gram-negative bacilli, which were eventually identified as Burkholderia cepacia; a course of imipenem-cilastatin therapy was initiated.
The patient did not respond clinically to increasing fluconazole doses, despite the results of susceptibility tests indicating dose-dependent susceptibility to this drug. In contrast, her clinical response to posaconazole was rapid (two weeks) and was maintained long-term (throughout four months of posaconazole therapy). In addition, she showed no signs of relapse after posaconazole therapy was discontinued. These observations suggest that posaconazole has activity against intra-abdominal Candida infection and that it warrants further study for this indication.
Table 2. Comparative in vitro activity of posaconazole and fluconazole against C. albicans and C. tropicalis.

<table>
<thead>
<tr>
<th>Study</th>
<th>Organism (No. of isolates)</th>
<th>MIC Range (µg/ml)</th>
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<tbody>
<tr>
<td></td>
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<td>Posaconazole</td>
</tr>
<tr>
<td>Pfaller et al. 2001 (10)</td>
<td>C. albicans (1,992)</td>
<td>0.007 to &gt;8</td>
</tr>
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<td>C. tropicalis (243)</td>
<td>0.015 to 8</td>
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<td>Barchiesi et al. 2000 (2)</td>
<td>C. albicans (84)</td>
<td>≤0.0078 to &gt;4.0</td>
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<td>C. tropicalis (20)</td>
<td>≤0.0078 to &gt;0.125</td>
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<td>C. albicans (660)</td>
<td>0.008 to &gt;8.0</td>
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<td>C. tropicalis (139)</td>
<td>0.015 to &gt;8.0</td>
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<td>C. albicans (90)</td>
<td>0.015 to 1.0</td>
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<td>0.015 to 0.25</td>
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<td>C. tropicalis (21)</td>
<td>0.018 to &gt;8</td>
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References