Treatment of Thrush with Itraconazole Solution: Evidence for Topical Effect

Itraconazole is active against almost all Candida albicans isolates that are susceptible to fluconazole and against ≥60% of fluconazole-resistant C. albicans isolates [1–2]. The hepatic metabolism of itraconazole is accelerated by concurrent therapy with agents that increase hepatic microsomal enzyme activity. Unsuccessful itraconazole therapy has been documented for patients who have received concurrent rifampin [3]. Significantly reduced peak-saliva concentrations and area under the concentration-time curve have been reported for patients receiving itraconazole and concurrent rifabutin therapy [4].

A new oral itraconazole formulation in cyclodextrin is now available. Itraconazole solution appears to be at least as effective as other formulations for treatment of thrush and esophagitis due to C. albicans in immunocompromised patients [5]. In addition, this oral solution offers a potential advantage over other formulations that itraconazole is deposited topically at the site of mucosal infection. Although the accelerated hepatic metabolism of itraconazole due to concurrent rifampin or rifabutin therapy would negate the value of itraconazole for treatment of systemic mycoses, mucocutaneous infections may respond to a topical effect of itraconazole solution. To test this hypothesis, the following study was performed after approval by our local institutional review board and informed consent was obtained.

Ten episodes of thrush were treated with itraconazole solution (200 mg/20 mL) once daily in eight male patients with AIDS who were also receiving concurrent rifampin or rifabutin treatment. The patients were asked to swish the itraconazole solution in their mouths for at least 10 seconds before swallowing. Serum and saliva samples were obtained for measurement of itraconazole concentrations when the patients were evaluated for clinical response 1 week after treatment. Itraconazole concentrations were determined by use of a bioassay [6]. Two patients were studied on two occasions, separated by at least 2 weeks between treatment courses.

Cultures of plaque specimens from all patients yielded C. albicans. All but one case of thrush resolved completely 1 week after treatment. The other case, the only patient receiving concurrent rifampin [3], had measurable serum and salivary concentrations at any time point.

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measurable serum itraconazole levels, a topical effect of itraconazole was more likely responsible for therapeutic benefit in patients without detectable serum levels of itraconazole.

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References

Group B Streptococcal Meningoencephalitis After Conization in a Nonpregnant Woman

Group B streptococci (GBS), Streptococcus agalactiae, are a major cause of meningitis and septicaemia in neonates and pregnant women [1]. GBS can be isolated from genital and/or lower gastrointestinal-tract culture specimens from women (15%–40%) [2]. In nonpregnant adult patients, the most common clinical diagnoses associated with GBS are skin, soft-tissue, or bone infections [3]. To our knowledge, we describe the first case of meningoencephalitis due to GBS as a complication of conization in a nonpregnant woman.

Five days after undergoing conization, a 43-year-old nonpregnant and nonpostpartum woman developed a severe frontal headache, rapidly increasing in intensity, and fever (temperature, to 41°C), followed by nuchal rigidity and pain. On admission to the hospital, the patient became increasingly stuporous. A CT scan of the head was obtained and showed no cerebral lesions. A lumbar puncture, performed in the emergency department, yielded pale-yellow, turbid CSF that contained 9,600 WBCs/mm³. The levels of glucose and protein in the CSF were 71 mg/dL and 103 mg/dL, respectively.

Because meningococcal meningitis was suspected, empirical treatment with ampicillin, 4 g q.i.d., and dexamethasone, 4 mg b.i.d., was initiated. Gram staining of CSF obtained during a second lumbar puncture revealed gram-positive cocci that were identified as GBS by standard laboratory methods. Therapy with ampicillin was continued and resulted in a complete neurological recovery without complication.

Brief Reports

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Apparent GBS infections are an increasing cause of invasive disease in nonpregnant women, with an annual incidence among adults of 4.4 per 100,000 [4]; pneumonia, urinary tract infection, and endocarditis are noted as the most common focal sites. GBS meningitis, however, remains rare in adult patients. The characteristic clinical manifestations of GBS meningitis are similar to those of other types of bacterial meningitis, with acute onset of fever, headache, and nuchal rigidity. The majority of patients experience alteration in mental status comparable in severity to that in cases of meningitis due to Haemophilus influenzae B (HIB) or Neisseria meningitidis. The mortality of 18% associated with GBS meningitis is higher than that for meningitis due to HIB or N. meningitidis but similar to the mortality among cases of Streptococcus pneumoniae meningitis [5]. The prognosis for GBS meningitis is similar to that for major types of bacterial meningitis with a high cure rate, but neurological deficits or hearing impairment may occur in a few patients.

As reported in a recent review about the use of corticosteroids in cases of meningitis, clinical trials suggest that treatment with dexamethasone reduces the incidence of long-term neurological sequelae in children and animal models; the same should hold true for adults [6, 7]. Therefore, in the present case, we administered dexamethasone, 4 mg b.i.d., together with ampicillin. The patient had become increasingly stuporous on admission to the hospital, but she had a complete neurological recovery. However, currently there are insufficient data available concerning the use of corticosteroids in adults with bacterial meningitis to allow a reasonable analysis of the efficacy of such therapy.

There are reports of GBS infections occurring after diagnostic procedures [8, 9]. Pregnant women who are known to carry the organism in their vaginal tracts should receive intrapartum antibiotics to prevent GBS disease [10]. The case we describe might lead to the conclusion that to prevent GBS infection in women undergoing conization, use of a vaginal swab for screening for GBS prior to the procedure must be considered. However, because this is the first reported case of GBS meningoencephalitis after conization in a nonpregnant woman and because GBS infections

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