Brewer’s Yeast as a Cause of Infection

Sir—A statement in Dr. Chia’s letter, “S. [accharomyces] cerevisiae is an essentially nonpathogenic yeast that in rare cases has caused vaginitis... and fungemia in severely immunocompromised patients” [1] is not supported by a careful review of the literature. It has long been appreciated that ingested microorganisms can traverse the lining of the gut of experimental animals and disseminate [2, 3]. Oral administration of yeast solutions to a healthy subject has produced fungemia and funguria [4]. Jensen and Smith described a nonimmunocompromised individual who ingested >2.5 g/d of brewer’s yeast and developed disseminated S. cerevisiae infection [5].

Multiple articles, including two published in this journal, attest to a variety of infections caused by S. cerevisiae [6–11]. Most, but not all, of these patients were immunosuppressed.

Sobel et al. [12] described nine patients with vaginitis due to S. cerevisiae. None had ingested brewer’s yeast. The isolates were resistant to fluconazole and were relatively more resistant to other azoles. The authors state that “Together with the recent increase in numbers of immunosuppressed hosts, there has been a dramatic increase in reports of invasive diseases caused by Saccharomyces species... These diseases include fungemia, endocarditis, pneumonia, and infections of the urinary tract and skin in elderly, debilitated, or compromised patients... particularly those with AIDS... It is apparent that Saccharomyces species are independently capable, in highly susceptible hosts, of inducing disease and contributing to mortality.”

How often this yeast produces disease and how frequently such disease is associated with exogenous ingestion or other exposure is unknown. As with most infections, the interaction between inoculum, virulence, and host defense is the important determinant in the development of disease. Once individual saccharomyces infections are well described in the literature, journals are unlikely to accept additional, essentially repetitive case reports. Thus, the true incidence and prevalence of saccharomyces infections are unknown.

I would strongly discourage the use of brewer’s yeast in any patient, as it is unproven and potentially dangerous therapy.

David L. Smith
Infectious Disease Associates of Kansas City, Kansas City, Missouri

References