studies was Ortho-Novum 7/7/7 [Ortho Pharmaceutical Corporation, Raritan, NJ] and Triphasil [Wyeth Laboratories, Philadelphia]. Although the amount of hormones in such products is pharmacologic and, thus, nonphysiologic, the products are formulated to deliver fluctuating levels of hormones to approximate the rise and fall of endogenous hormones. To our knowledge, the effect of these triphasic preparations on the adherence of bacteria to uroepithelial cells has not been studied.

In conclusion, we have demonstrated a temporal association between the onset of the last menstrual period and presentation with acute uncomplicated cystitis in young otherwise healthy women. More than 40% of women with UTIs presented in the second week of the menstrual cycle. Our observation may reflect variations in sexual behavior of women over the course of the menstrual cycle. On the other hand, in vitro and in vivo data from numerous other studies suggest that the association may be related to the effects of estrogen on the host. If the association between the risk of UTI and the stage of the menstrual cycle is confirmed, it has implications for the possible use of behavioral or hormonal manipulation for prevention of UTI in women. Further study of the association between the stage of the menstrual cycle and the risk of UTI is clearly warranted.

Thomas M. Hooton, Carol Winter, Felice Tiu, and Walter E. Stamm

Departments of Medicine and Biostatistics, University of Washington School of Medicine, Harborview Medical Center, Seattle, Washington

References

Bilateral Ureteral Obstruction Due to Saccharomyces cerevisiae Fungus Balls

Fungus balls rarely result in acute renal failure, and the majority of cases have been caused by Candida albicans [1]. Saccharomyces cerevisiae is a common colonizer or contaminant of human mucosal surfaces and is generally encountered in bread, fruits, vegetables, beer, and wine [2]. Although this yeast has rarely been the cause of systemic infections [2], it can become pathogenic in immunocompromised patients [3]. Fewer than 20 cases of human infection due to S. cerevisiae, including three urinary tract infections, have been reported [2]. To the best of our knowledge, S. cerevisiae fungus balls of the urinary tract have not previously been described. We report a case of S. cerevisiae fungus balls that were associated with total bilateral ureteral obstruction in a patient who underwent a cutaneous transileal ureterostomy.

A 67-year-old man was admitted to the Infectious Disease Service with a fever of unknown origin. Three months earlier he had undergone anterior pelvectomy with cystectomy, prostatectomy, and cutaneous ureterostomy (Bricker’s operation) for urothelial carcinoma and prostatic adenocarcinoma. Two weeks after the surgery, the patient presented with aspiration pneumonia and was treated with amoxicillin/clavulanic acid and amikacin for 15 days. Since the patient remained febrile, he received pefloxacin (400 mg b.i.d.) and prednisone (20 mg q.d.). This regimen was continued for 4 weeks, with no improvement in his condition.

On admission to our service, the patient was noted to be in poor general condition, febrile (temperature, 39.7°C), and oliguric.
June 1996; 23 (September) Brief Reports 637

This treatment resulted in elimination of fungal material from the percutaneous pyelostomy catheters during the first 2 weeks.

The patient's renal function improved, the fungal material dissolved, and cultures of the urine became sterile. At follow-up 3 months after discharge from the hospital, his urine was sterile, but the bilateral hydronephrosis persisted, and permanent nephrostomy tubes were placed in both renal pelvises.

Saccharomyces species can colonize the human urinary tract in the setting of chronic underlying disease, but these yeasts have rarely been reported to cause renal disease (i.e., pyelonephritis and/or renal abscess) in humans [3]. S. cerevisiae is not likely to produce fungus balls, since germ tube production is lacking, and only rudimentary pseudohyphae are noted in culture.

The majority of serious infections due to Saccharomyces species have been treated with amphotericin B; however, ketoconazole has also been used to eradicate the organisms from the urine. There is no evidence that iv amphotericin B therapy could have prevented the ureteral stenosis in our patient, since combination therapy with itraconazole and 5-fluorocytosine rapidly eradicated S. cerevisiae from his urine. The cause of this complication, which necessitated the placement of permanent percutaneous nephrostomy tubes, is not clear; fungal fibrosisclerosis, ureteral ischemia resulting from surgery, or extension of the carcinoma may have been involved.

In vitro susceptibility testing of this yeast may be difficult, and therapy with imidazoles and 5-fluorocytosine may be either additive or synergistic [4]. Oral itraconazole—a new triazal antifungal with broad-spectrum activity [5]—and iv 5-fluorocytosine should be used to treat fungus balls or urinary tract infections due to S. cerevisiae when concomitant acute renal failure, which precludes treatment with iv amphotericin B, is present.

Eric Senneville, Païza Ajana, Yann Gérard, Jean-Michel Bourez, Serge Alfandari, Christian Chidiac, and Yves Mouton
Division of Infectious Diseases, Department of Medicine, The University of Lille, Lille, France

References