URETERAL STENT IN MANAGEMENT OF FUNGAL PYONEPHROSIS DUE TO TORULOPSIS GLABRATA

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ABSTRACT—An indwelling ureteral stent was successfully used to relieve an obstructive uropathy with secondary fungal pyonephrosis caused by Torulopsis glabrata.

Fungal infections of the urinary tract occur in the chronically ill and debilitated patient. Appropriate treatment of urinary fungal infections requires improvement of host resistance, appropriate antimicrobial therapy, and relief of obstructive uropathy. This article cites the use of an internal double pigtail stent in the management of fungal pyonephrosis due to Torulopsis glabrata which developed in a patient with long-standing asymptomatic hydronephrosis.

Case Report

A seventy-two-year-old woman was hospitalized for the treatment of severe colitis which had fistulized. The patient was aware of a long-standing hydronephrosis presumably due to a ureteral pelvic junction obstruction which had not caused the patient any clinical problems (Fig. 1A).

Following a course of multiple broad-spectrum antibiotic therapy and parenteral nutrition, the patient had an exploratory laparotomy with a diverting ileostomy. Several weeks post surgery, recurrent fever developed and purulent urine yielded Torulopsis glabrata on culture. Repeat computerized tomography (CT) scan demonstrated marked increase in obstruction of the right kidney (Fig. 1B). Cystoscopy and retrograde studies confirmed that the purulent material funguria emanated from the right kidney. It was uncertain whether or not the increase in obstruction was due to postsurgical periureteral inflammatory changes or fungal material obstructing the ureter.

In view of the patient's poor clinical status and the presence of an external ileostomy an internal indwelling stent was placed. Defervescence occurred within forty-eight hours, and her urine became clear. Since in vitro studies indicated fungal sensitivities to flucytosine, this antimycotic drug was administered for two weeks. Repeat urine cultures were negative for fungus and bacteria. A subsequent CT scan documented marked decrease in the obstructed right kidney (Fig. 1C).

The patient subsequently was discharged home for convalescence. Four months later she was readmitted with a bacterial pyelonephritis which responded to appropriate antibiotic therapy following which she had a nephrectomy. Pathologic study demonstrated a chronic pyelonephritis without evidence of fungal infection.

Comment

Torulopsis glabrata is a yeast which can be found as a saprophyte in the gastrointestinal tract. In the debilitated patient T. glabrata can become an opportunistic pathogen with significant morbidity.1 A recent clinical study noted Torulopsis in 3 of 11 patients with fungal infection of the urinary tract.2 Percutaneous nephrostomies have been used successfully to relieve obstructive uropathy secondary to Candida albicans.3,4 Utilization of this procedure was considered to be one option to relieve this patient's obstructive uropathy. Since the patient had an external ileostomy draining from the...
right lower quadrant, consideration was given to other techniques that would relieve obstruction without major surgery or leaving another external appliance.

The use of double-ended pigtail stents have gained wide use in the management of upper tract obstruction due to benign and malignant conditions. For this reason this technique was considered and used successfully to drain the patient's kidney. T. glabrata do not form mycelia or accretions known as fungal balls. Thus, the use of the stent was feasible. If Candida albicans had been the offending organism the presence of mycelial accretions or fungal balls may have prevented the relief of obstruction with stent. However, recent experience indicates that the guidewire supplied with the percutaneous nephrostomy or indwelling ureteral stents may be used to fragment fungal ball material.

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References