CORRESPONDENCE

Infective Endocarditis Giving Rise to Peritonitis in a Patient on Peritoneal Dialysis

Editor:

We report a case of infective endocarditis (IE) with an initial presentation of peritoneal dialysis (PD) peritonitis that was caused by non-enterococcal group D *Streptococcus* (*S. equinus*). To our knowledge, the present report is the first of this presentation in a PD patient.

A 77-year-old woman with a history of chronic kidney disease and left renal cell carcinoma who had undergone left nephrectomy had been on continuous ambulatory PD for 7 years. She developed a low-grade fever of up to 37.6°C for 2 weeks and then nausea, diarrhea, and diffuse abdominal cramping pain 1 week later. The patient initially had no cloudy effluent or erythema of the exit site or tunnel. Soon after admission, septic shock developed, associated with turbid effluent.

Laboratory tests showed a PD effluent cell count of 3640/mm³, with 97% neutrophils; leukocytosis (18 900/mm³, 92% neutrophils); and elevated C-reactive protein (15.5 mg/dL). Cultures of PD effluent and blood both grew *S. equinus*.

After administration of antibiotics (parenteral ceftazidime and vancomycin), the patient markedly improved, and her PD fluid cell count declined to 50/mm³ at day 7 and to 1/mm³ at day 14. Episodic fever (37.6°C–38.2°C) was recorded every 1–2 days after the PD fluid had become clear.

Abdominal contrast-enhanced computed tomography and transthoracic echocardiography revealed no infection focus or bowel carcinoma. Transesophageal echocardiography revealed one 4.3-mm vegetation on the aortic valve, and thus IE was diagnosed. After completion of antibiotic treatment with vancomycin for 4 weeks, the symptoms of infection subsided.

DISCUSSION

S. bovis and *S. equinus* are included among the Lancefield group D streptococci. These strains, particularly *S. bovis*, have been reported to be associated with

IE, sepsis or bacteremia, and colon carcinoma (1). In the case of *S. equinus*, only a very few cases of human infection have been reported (2). Several reports have described *S. equinus* endocarditis (3,4) that may have developed with a concomitant gastrointestinal disorder (5), but only one case report has described *S. equinus* PD peritonitis (6). Only two documented reports of concomitant bacterial endocarditis and PD peritonitis are available, and in both cases, the patient developed turbid dialysate or catheter infection first (7,8).

In the case of our patient, history confirmed 2 episodes of fever before cloudy PD effluent and gastrointestinal symptoms appeared. Furthermore, febrile episodes continued to be noted after the effluent became clear, indicating persistent bacteremia caused by endocarditis rather than by unresolved peritonitis. Thus, we hypothesize that the primary infection focus was IE in this PD patient who initially presented with peritonitis.

CONCLUSIONS

We report the first case of IE with an initial presentation of PD-related peritonitis caused by an extremely rare organism, *S. equinus*, that responded well to antibiotic treatment with vancomycin. In patients diagnosed with peritonitis who show a poor treatment response or whose infection is caused by a rare organism, the possibility of IE should be excluded by transesophageal echocardiography rather than transthoracic echocardiography.

DISCLOSURES

The authors have no financial conflicts of interest to declare.

M.J. Tsai^{1,2}
W.C. Yang^{1,2}
T.W. Chen³
C.C. Lin^{2,1*}

Division of Nephrology¹
Department of Medicine
Taipei Veterans General Hospital
School of Medicine²

National Yang-Ming University
Division of Nephrology³
Department of Medicine
Taipei Medical University Hospital
Taipei, Taiwan

*email: lincc2@vghtpe.gov.tw

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doi:10.3747/pdi.2012.00094