

## CLINICAL VIGNETTE

# *Pantoea* Bacteremia: Contaminated TPN or Stepping on Pricklies?

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### Case

A 31-year-old female on total parenteral nutrition presented with fevers for one week and left lower quadrant abdominal pain for one day. She has short bowel syndrome secondary to a motor vehicle accident three years prior, total parenteral nutrition dependence via left chest central line, upper extremity deep vein thrombus on warfarin, and history of staphylococcus epidermidis central line-associated bloodstream infection (CLABSI). She was recently hospitalized for oxacillin-resistant *Staphylococcus epidermidis* CLABSI with tunnel and exit site infection. She completed a fourteen-day course of daptomycin after removal and replacement of her central line.

Prior to presenting to the hospital, she was primarily self-managing her Hickman catheter with occasional help from a home health nurse. She received total parenteral nutrition and intravenous fluids through the Hickman catheter. She also noted a week prior to admission, she was walking barefoot in her backyard and stepped on “pricklies”. On admission, CT abdomen/pelvis was notable for hemorrhagic ovarian cysts and possible pneumonia. OB/GYN recommended conservative management. Blood cultures were drawn from the Hickman catheter and peripheral intravenous lines and grew *Pantoea* species. She was started on piperacillin/tazobactam and infectious disease was consulted. Infectious disease recommended discontinuing piperacillin/tazobactam and starting ceftriaxone 2 grams daily for fourteen-days with gentamycin without line removal. She completed the course of antibiotics without complications.

### Discussion

*Pantoea* is gram negative bacillus that is part of the Enterobacteriaceae family.<sup>1</sup> *Pantoea* was initially noted to be a plant pathogen and now has also been associated with aquatic environments, insects, animals as well as humans. *Pantoea* infections have been reported to involve bones and joints, osteomyelitis, synovitis, endocarditis, endophthalmitis, cutaneous infections and bacteremia.<sup>2</sup> There have been reports of iatrogenic outbreaks involving parenteral nutrition solutions, powdered infant formula, blood transfusions and dialysate solutions.<sup>3-5</sup> In addition to iatrogenic bacteremia, it is also possible to ingest *Pantoea* as it is commonly found on plants. Patients with gastroesophageal reflux disease (GERD) who are on antacids are more susceptible.<sup>6</sup> It is also possible to acquire *Pantoea* bacteremia though direct trauma through the skin.

The infectious disease consultants suspected this patient may have developed *Pantoea* bacteremia related to skin puncture by thorns as she reported stepping on “pricklies” prior to admission. However, it was also possible that she may have acquired this infection iatrogenically from her total parenteral nutrition. An outbreak of *Pantoea* was reported in 2004 at a neonatal intensive care unit in Malaysia associated with administration of parenteral nutrition.<sup>4</sup> It would be prudent to review protocols for parenteral nutrition, fluids and dialysate solutions if future outbreaks occur.

### REFERENCES

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