Q6 WHAT IS THE NEXT BEST STEP?

A. Continue therapy and resample PD fluid in 3 days
B. Switch oral ciprofloxacin to IP gentamicin
C. Switch IP ceftazidime to IV cefepime
D. Remove peritoneal dialysis catheter

The correct answer is D.

This patient has refractory peritonitis. It is defined by the ISPD by failure of the PD effluent to ear after 5 days of appropriate antibiotics. It is a 1D recommendation, and it is often qualified by the scenario that if the patient is clinically improving and cell count is decreasing. Therefore, choice is is the next best answer. However, due to the poor treatment rates of pseudomonas, the relatively high cell count of 5000 u/l at 5 days, and persistently cloudy effluent with abdominal pain, the best choice is to remove the catheter.

The ISPD also makes a specific comment of Pseudomonas that if there is no clinical response after 5 days of effective antibiotic treatment, we suggest that *Pseudomonas* peritonitis be treated with early catheter removal instead of using three antibiotics as an attempt to salvage (2D recommendation).

Retrospective case series showed that the use of two anti-pseudomonal antibiotics is associated with better outcomes, but the use of three anti-pseudomonal antibiotics does not further improve complete cure or relapse rate. Instead of using three antibiotics, catheter removal is often needed to minimize prolonged peritoneal inflammation or repeat peritonitis episodes. Another observed untoward effect of protracted antibiotic treatment of *Pseudomonas* peritonitis is a significant decline in residual kidney function.

Additional reading:

https://journals.sagepub.com/doi/epub/10.1177/08968608221080586