

THIS CPD/CEU EXERCISE IS PRESENTED UNDER THE THISTLE QA SERVICE PROVIDER NO : MT00025. IT IS DESIGNED TO TAKE PLACE WITHIN YOUR OWN LABORATORY AS A SMALL GROUP ACTIVITY LASTING APPROXIMATELY ONE HOUR. PLEASE ENSURE THAT YOU KEEP A REGISTER OF THOSE TAKING PART IN THIS EXERCISE AND SUBMIT YOUR APPLICATION FOR 1 CEU POINT ON THE APPROPRIATE HPCSA FORM, ALONG WITH THE RELEVANT THISTLE QA PARTICIPATION CERTIFICATE SENT TO YOUR LAB WITH YOUR EQA KIT AND INSTRUCTIONS.

Cycle 19 Organism 6

The causative organism was *Stenotrophomonas maltophilia*.

Stenotrophomonas maltophilia (*S. maltophilia*) is a common colonizer of the respiratory tract of patients with chronic lung disease¹. The significance of *S. maltophilia* in cultures is not always clear and must be interpreted in conjunction with patient information and clinical history. The majority of isolates from respiratory specimens represent colonization rather than infection. *S. maltophilia* however is recognized as a significant nosocomial pathogen and can be associated with substantial morbidity and mortality². Risk factors for colonization and infection include mechanical ventilation³, broad-spectrum antibiotic prophylaxis³, the use of central venous catheters⁴, and neutropenia³.

Infections caused by *S. maltophilia* are numerous and include bacteraemia⁴, meningitis⁵, urinary tract infections⁶, mastoiditis³, continuous ambulatory peritoneal dialysis-associated peritonitis⁷. The role of *S. maltophilia* as an emerging pathogen, rather than just a colonizer⁸, in patients with cystic fibrosis (CF) is under consideration. Some evidence suggests a progressive decline in pulmonary function in patients chronically colonized with 10⁵ to 10⁶ CFU/ml⁹. In the USA, data from the 1999 Cystic Fibrosis Foundation registry reported that this organism was isolated from 6,4% of CF patents¹⁰. CF clinical trials demonstrated a prevalence of 10,2%¹⁰.

According to the Clinical and Laboratory Standards Institute (CLSI) 2005 the recommended antimicrobial agents for the treatment of *S. maltophilia* are trimethoprim-sulfamethoxazole, minocycline and a fluoroquinolones such as levofloxacin. Other antimicrobial agents may appear to be active *in vitro* but are not effective clinically and should not be reported.

References

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4. Muder, RR. *et al.* Bacteremia due to *Stenotrophomonas maltophilia*: a prospective multicenter study of 91 episodes. 1996. Clin Infect Dis. 22: 508-512.
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7. Szeto, CC. *et al.* *Xanthomonas maltophilia* peritonitis in uremic patients receiving continuous ambulatory peritoneal dialysis. 1997. Am J Kidney Dis. 29: 91-95.
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9. Karpati, F. *et al.* Bacterial colonization with *Xanthomonas maltophilia* – a retrospective study in cystic fibrosis patient population. 1994. Infection. 22: 258-263.
10. Cystic Fibrosis Foundation. 2000. Patient Registry 1999 Annual Data report. Cystic Fibrosis Foundation, Bethesda, Md.

Service Provider No. : MT – 00025

CPD Questions.

1. What is the significance of *S. maltophilia* isolated from respiratory tract specimens?
2. What types of infections are caused by *S. maltophilia*?
3. What are the recommended antimicrobial agents used to treat *S. maltophilia* infections?

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