

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 5

The causative organism was *Staphylococcus saprophyticus*

Two distinct populations of patients develop urinary tract infections with Coagulase-negative staphylococci. *Staphylococcus saprophyticus* (*S. saprophyticus*) is an uropathogenic staphylococcus frequently isolated from young female outpatients with uncomplicated urinary tract infections. *S. saprophyticus* is a true urinary tract pathogen causing both upper and lower urinary tract infections<sup>1</sup>. Symptoms of a urinary tract infection are present in more than 90% of woman from whom *S. saprophyticus* has been isolated. Pyuria is present in 70% - 85% of these women, with the organism culture contaminant rate only 5% of the time<sup>2,3</sup>. Signs, symptoms and urinalysis of woman infected with this organism are indistinguishable from those infected with enteric bacteria. It is clearly an organism predominantly infecting young, sexually active woman. Almost 70% of woman in one study gave a history of sexual intercourse within 24 hours preceding the onset of symptoms of their urinary tract infection<sup>3</sup>.

Comparing urinary tract infections caused by *Staphylococcus saprophyticus* and Coagulase-negative staphylococci (CNS); *Staphylococcus saprophyticus* affects woman 95% in the age group 16 – 35 years old, while with CNS infections, men and woman are affected equally and patients are usually older than 50 years. With regard to the population at risk *Staphylococcus saprophyticus* is usually found in healthy outpatients, 90% having symptoms indistinguishable from enteric Gram-negative organisms, while CNS are found in hospitalised patients with urinary tract complications, 90% which are asymptomatic<sup>3</sup>.

*Staphylococcus saprophyticus* is readily identified in the laboratory owing to its resistance to a 5µg novobiocin disk. Novobiocin resistance is rarely found among even multiple resistant CNS of other species that are cultured from urine<sup>2</sup>.

Therapy is usually effective with most urinary tract antimicrobial agents. Recommended treatment is oral cephalosporins, amoxicillin/clavulanic acid, and fluoroquinolones. Therapeutic failures have been reported with sulphonamides and nitrofurantoin<sup>4</sup>.

## References

1. Latham, RH. *et al.* Urinary tract infections in young adult woman caused by *Staphylococcus saprophyticus*. JAMA. 1983; **250**: 3063-3066.
2. Nicolle, LE. *et al.* Characterization of Coagulase-negative staphylococci from urinary tract specimens. J Clin Microbiol. 1983; **17**: 267-271.
3. Jordan, PA. *et al.* Urinary tract infections caused by *Staphylococcus saprophyticus*. J Infect Dis. 1980; **142**: 142-515.

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4. Coordinated multicenter study of norfloxacin versus trimethoprim-sulfamethoxazole treatment of symptomatic urinary tract infections. J Infect Dis. 1987; **115**: 170-177.

**Service Provider No. : MT – 00025**

**CPD Questions.**

1. What types of patients are inclined to get *S. saprophyticus* infections?
2. What are the usual symptoms of *S. saprophyticus* infections, and how do they generally differ from that of Coagulase-negative staphylococcal infections?
3. How will you differentiate *S. saprophyticus* from other Coagulase-negative staphylococci?

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