

Please read this bit first

The HPCSA and the Med Tech Society have confirmed that this clinical case study, plus your routine review of your EQA reports from Thistle QA, should be documented as a “Journal Club” activity. This means that you must record those attending for CEU purposes. Thistle will **not** issue a certificate to cover these activities, nor send out “correct” answers to the CEU questions at the end of this case study.

The Thistle QA CEU No is: **MT00025**.

Each attendee should claim **THREE** CEU points for completing this Quality Control Journal Club exercise, and retain a copy of the relevant Thistle QA Participation Certificate as proof of registration on a Thistle QA EQA.

Cycle 22 Organism 11:

Streptococcus milleri group (Streptococcus anginosus group)

Streptococcus intermedius, *Streptococcus constellatus*, and *Streptococcus anginosus* are three distinct species that constitute the “*Streptococcus anginosus* group”. This group is also referred to as the “*Streptococcus milleri* group” or in the past, as the “*Streptococcus intermedius* group”. The classification, nomenclature, and identification of members of this group have been confusing.

Clinically this group has long been characterized by a propensity for invasive pyogenic infections, which readily differentiates them from the other viridans streptococci. The *S. anginosus* group often requires carbon dioxide for growth. Like other streptococci, these organisms may be beta-haemolytic, alpha-haemolytic or non-haemolytic on sheep blood agar. Members of this group often exhibit Lancefield antigens A, C, F, or G. A characteristic caramel-like odor is associated with agar cultures of the *S. anginosus* group. It has been suggested that this odor, when present, may be diagnostic for this group of microorganisms, which is caused by the formation of the metabolite diacetyl.

Members of the *S. anginosus* group are found in the human oral cavity, where they have been considered harmless commensals. These microorganisms can be isolated from gingival crevices, dental plaque, and dental root canals. They can also be found in the throat and nasopharynx. The association of the *S. anginosus* group with the tendency to form abscesses has long been recognized.

This group of organisms are associated with head and neck infections, bacteraemias and endocarditis, central nervous system especially brain abscesses – 50% to 80% of these infections, abdominal infections, and thoracic infections.

Clinically, infections caused by these streptococci have responded well to penicillin G and cephalosporins. Vancomycin and clindamycin have been useful in patients with beta-lactam allergies. The recent increase in MICs to penicillin G suggests that initiation of penicillin g combined with gentamicin may be prudent.

Questions:

1. What members of the genus Streptococcus are classified under the Streptococcus milleri group?
2. What is a general identifying characteristic of this group?
3. What infections does the Streptococcus milleri group cause?
4. What antibiotics are used to treat Streptococcus milleri group infections?

S A N A S



PROFICIENCY
TESTING

SANAS Accredited to ISO Guide 43 / ILAC G13