



Beat the Bug: *Aerococcus* spp.

Aerococcus spp. are alpha hemolytic gram-positive cocci that grow in pairs, clusters, or tetrads. Historically *Aerococcus* spp. have often been misidentified as streptococcus, enterococcus, or staphylococcus. The most common species are *A. urinae*, *A. viridans*, *A. sanguinicola*. Urinary tract infections, bacteremia, and endocarditis due to *Aerococcus* spp. have been reported.¹ When *Aerococcus* spp. is recovered, what treatment options exist?

	Antibiotic	Comments
Usually active ²	Penicillin	High rates of resistance reported with <i>A. viridans</i> and <i>A. viridans/urinaeequi</i> ¹
	Ceftriaxone	High rates of resistance reported with <i>A. viridans</i> and <i>A. viridans/urinaeequi</i> ¹
	Vancomycin	
	Linezolid	High rates of resistance reported with <i>A. viridans</i> ¹
	Trimethoprim-sulfamethoxazole	<i>A. urinae</i> will appear susceptible <i>in vitro</i> , but <i>in vivo</i> susceptibility will depend on urinary folate concentrations. CLSI recommends against susceptibility testing for <i>A. urinae</i> ²
	Levofloxacin, ciprofloxacin	High rates of resistance reported with <i>A. sanguinicola</i> and <i>A. urinae</i> ^{3,4}
Alternatives	Meropenem	Carbapenems should be preserved when more narrow spectrum are available. Resistance has been reported in <i>A. sanguinicola</i> ³
	Tetracycline	Poor serum and urine concentration likely preclude as a primary option

Does *Aerococcus* spp in a blood culture always require treatment?

Possibly not. In one cohort of patients with *Aerococcus* spp. bacteremia, 32 out of 81 patients had growth in only one blood culture bottle out of multiple collected bottles and lacked a compatible clinical syndrome. These 32 patients were not treated with antibiotics with 78% (25/32) surviving without bacteremia recurrence, 16% (4/32) dying from a non-infection related cause, and 3 patients were lost to follow up. These findings suggest that *Aerococcus* spp. can be a blood culture contaminant or a self-resolving transient bacteremia.¹

Key Takeaway: Several antibiotic options are available to treat infections due to *Aerococcus* spp. Resistance varies among different species. *Aerococcus* spp. in a single blood culture may not need treatment.

References

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