Anaerobic Gram Positive Bacilli - other (LTR57853)

Edit Approved By: Dragan, Tatiana (09/22/2021) **Revision: 4.00**

Organism

Anaerobic Gram Positive Bacilli – other

- *Actinobaculum spp*
- *Actinotignum spp*
- *Alloscardovia spp*
- *Anaerotruncus spp*
- *Atopobium spp. (cocci/bacilli)*
- *Bifidobacterium spp*
- *Bulleidia spp*
- *Catabacter spp*
- *Coprococcus spp*
- *Collinsella spp*
- *Cryptobacterium spp*
- *Eggerthia spp*
- *Eubacterium spp*
- *Eggerthella spp*
- *Faecalibacterium spp*
- *Flavonifractor spp*
- *Filifactor spp*
- *Gordonibacter spp*
- *Mobiluncus spp*
- *Mogibacterium spp*
- *Oribacterium spp*
- *Olsenella spp.*
- *Paraeggerthella spp*
- *Parascardovia spp*
- *Propionimicrobium spp*
- *Pseudoramibacter spp*
- *Robinsoniella spp*
- *Roseburia spp*
- *Scardovia spp*
- *Shuttleworthia spp*
- *Slackia spp. (cocci/bacilli)*
- *Solobacterium spp*
- *Varibaculum spp*

Clinical

These organisms are part of the normal flora of the upper respiratory and gastrointestinal tracts. Although of low pathogenicity, they have been found in polymicrobial infections including wound infections, genitourinary tract infections (including intrauterine contraceptive related pelvic infections). They rarely are isolated in bacteremia but have been reported in endocarditis, pleuropulmonary infections, brain abscess/meningitis and peritonitis.

Usual susceptibility pattern

These organisms are usually susceptible to penicillin, clindamycin, and carbapenems. Occasional strains are resistant to clindamycin. Susceptibility to metronidazole is variable and resistance has been described in *Actinobaculum/Actinotignum, Atopobium, Bifidobacterium, Eggerthella, Eubacterium* and *Mobiluncus spp.*

Susceptibility method

Etest method using Laked Blood Agar incubated anaerobically at 35°C for 48 - 72 hours, depending on growth characteristics. (Clindamycin – read at 48 hours)

Note: Use 1.0 McFarland suspension in pre-reduced, enriched thioglycollate broth.

Anaerobic Gram Positive Bacilli - other, Continued

Susceptibility reporting

	CSF/ Brain	Blood	Sterile Body Site	Comments
Clindamycin			✓	
Meropenem	✓	2	2	2nd line if pen I/R.
Metronidazole	✓	✓	✓	**See Special Considerations**
Penicillin	✓	✓	✓	If pen I/R **see Special Considerations**
Piperacillin/ tazobactam		2	2	2nd line if pen I/R

Note: Consult microbiologist regarding the need for susceptibility testing. Susceptibility testing is recommended if organism is sole isolate from sterile body site. For other sites, or if isolated with other organisms, clinical correlation and correlation with Gram stain is required. Generally, susceptibility testing is not recommended if multiple organisms isolated.

At microbiologist's discretion, add comment:

"These organisms are usually susceptible to penicillin, clindamycin and carbapenems. Susceptibility to metronidazole is variable". **(21337)**

Special considerations

<table>
<tr><td>Penicillin:</td><td>If penicillin I/R:
Perform β-lactamase test.
Do not report β-lactamase result.
<table>
<tr><th>IF…</th><th>THEN…</th></tr>
<tr><td>β-lactamase positive</td><td>Report penicillin R</td></tr>
<tr><td>Penicillin I/R
and
β-lactamase negative</td><td>This may indicate an altered penicillin binding protein mechanism of resistance.
Consult microbiologist
If penicillin I/R and β-lactamase negative report pip/tazo as R.</td></tr>
</table></td></tr>
<tr><td>Metronidazole:</td><td>Many non–spore-forming, gram-positive anaerobic rods are resistant to metronidazole.</td></tr>
<tr><td></td><td>Aerotolerant organisms should be reported as metronidazole resistant.</td></tr>
<tr><td></td><td>Efficient anaerobiasis must be achieved within 1-2 hours of incubation. Failure to do so may result in false resistance result.</td></tr>
</table>

Interpretation

For Etest, report actual MIC result. For interpretation (S, I, or R) report according to the nearest higher doubling dilution **(Appendix 1)**.

Use **CLSI** interpretive document for **Anaerobes**.