Shpopephlococ ci pneumonia (including penicillin-resistant strains)
Staphylococci aureus (including methicillin-resistant strains)
Vibrio species
Actinomyces species
Actinobacteria
Susceptibility Tests
Quantitative methods are used to determine antimicrobial minimum inhibitory concentrations (MICs). These MICs provide estimates of the susceptibility of bacteria to antimicrobial compounds. The MICs should be determined using a standardized procedure. Standardized procedures are based on a dilution method (broth or agar) equivalent with standardized inoculum and dilution techniques and standardized concentrations of vancomycin powder. The MIC values should be interpreted according to the following criteria:

For testing standard microorganisms other than enterococci:
- Susceptible (S): MIC ≤ 1 µg/mL
- Intermediate (I): 2 µg/mL ≤ MIC ≤ 16 µg/mL
- Resistant (R): MIC ≥ 32 µg/mL

For testing enterococci:
- Susceptible (S): MIC ≤ 2 µg/mL
- Intermediate (I): 4 µg/mL ≤ MIC ≤ 8 µg/mL
- Resistant (R): MIC ≥ 16 µg/mL

Interpretation criteria applicable only to tests performed by broth microdilution method using cation-adjusted Mueller-Hinton broth:

The current absence of data on resistant strains precludes defining any categories other than “Susceptible”. Strains yielding MIC results suggestive of a “susceptible” category should be submitted to a reference laboratory for further testing.

Interpretation criteria applicable only to tests performed by disk diffusion method using Mueller-Hinton agar:

The current absence of data on resistant strains precludes defining any categories other than “Susceptible”. Strains yielding zone diameters suggestive of a “susceptible” category should be submitted to a reference laboratory for further testing.
Vancomycin has been reported to be effective alone or in combination with an aminoglycoside for endocarditis caused by penicillin-resistant Staphylococcus aureus. The administration of vancomycin has also been effective in the treatment of a wide variety of infections caused by gram-positive bacteria. Vancomycin has been reported to be effective only in combination with an aminoglycoside.

Vancomycin has been used successfully in combination with either an aminoglycoside, an anucleate amorphous, or both in early-stage streptococcal septicemia. This combination has been reported to be effective in the treatment of severe infections caused by gram-positive bacteria. However, it is important to note that the combination of vancomycin and an aminoglycoside has not been found to be superior in terms of bactericidal activity compared to vancomycin alone. The use of aminoglycosides in combination with vancomycin is primarily based on empirical evidence and should be guided by susceptibility testing results.

To determine their susceptibilities to vancomycin, the clinical isolate and any relevant clinical factors and maintain the effectiveness of vancomycin and other antibacterial drugs, vancomycin should be used only in the treatment of infections that are known or strongly suspected to be caused by susceptible strains of the target bacterial species. They should be sampled in selected or modified antibiotic laboratory tests. In the absence of such local, data should be obtained to determine whether vancomycin is an appropriate choice for the treatment of the infection. However, when vancomycin is used in combination with other drugs, it is important to consider the potential for drug interactions and the need for careful monitoring of the patient's response to therapy.

Vancomycin is contraindicated in patients with known hypersensitivity to this antibiotic. Severe allergic reactions (such as anaphylaxis and urticaria) and neutropenia have been reported with the use of vancomycin. In rare cases, anaphylactic reactions have been reported, including cases in which patients died. In addition, neutropenia has been reported in patients receiving vancomycin.

**Warnings**

Rapidly administered (i.e., over several minutes), this drug may be associated with hypotension. Hypotension, and rarely, cardiac arrest. Vancomycin should be administered over a period of at least 60 minutes to avoid rapid infusion-related reactions. Stopping the infusion usually results in prompt resolution of these reactions. Oliguria has occurred in patients receiving vancomycin. It may be transient or permanent. It has been reported mainly in patients who have been given doses above 1 g, in patients with underlying renal disease, or who have been treated with other nephrotoxic drugs. When vancomycin was discontinued, azotemia resolved in most patients. When vancomycin was discontinued, azotemia resolved in most patients. Therefore, caution should be exercised when using vancomycin in patients with renal insufficiency.

**Dosage and Administration**

Vancomycin is administered intravenously for the treatment of infections caused by susceptible strains of gram-positive bacteria, including methicillin-resistant Staphylococcus aureus (MRSA) and S. epidermidis. It is commonly administered as a continuous intravenous infusion over 60 minutes. Lower doses may be used in patients with decreased renal function or in those who are elderly. When vancomycin is administered as a continuous intravenous infusion, the rate of administration should be slowed if signs of hypotension or other adverse reactions occur. The rate of administration should be increased in patients with impaired renal function. When vancomycin is administered as a single intravenous injection, the dose should be divided into smaller doses over 60 minutes to minimize the risk of toxicity.

**Precautions**

Patient failures have occurred in the management of vancomycin-resistant gram-positive organisms. Careful monitoring of renal function is recommended in patients with renal dysfunction or those who have received prior antibiotic therapy. In patients with renal insufficiency, vancomycin clearance decreases as the glomerular filtration rate decreases. In patients with severe renal impairment, vancomycin clearance may be reduced by up to 50%. Precautions should be taken when administering vancomycin to patients with renal insufficiency, and dosages should be adjusted accordingly.

**Contraindications**

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**Adverse Reactions**

Vancocin® HCl (Vancomycin Injection, USP) is supplied as a frozen, iso-osmotic, premixed solution in a 100 mL or 250 mL single-dose glass bottle.