Vancomycin Resistant Enterococci
(VRE)

Enterococci is the a name given to certain kinds of bacteria normally present in the human bowel or intestine. Enterococci typically stay in the human intestines without causing any disease or symptoms. Sometimes, this bacteria can leave the intestines and cause:

- A urinary tract infection.
- Blood stream infection.
- Infection inside the abdomen.
- Infection of a wound following surgery.

CAUSES

Vancomycin is an antibiotic that is often used to treat infections caused by enterococci. Sometimes enterococci becomes resistant to this drug. This is called vancomycin-resistant enterococci (VRE). Most VRE infections occur in patients who are or have been in a hospital.

You may be at increased risk to have VRE in your intestines, on your skin, or causing infection if:

- You have been previously treated with vancomycin and combinations of other antibiotics. A combination may include penicillin and gentamicin.
- You are hospitalized, especially when you receive antibiotic treatment for long periods of time.
- You have a weakened immune systems because you are a:
  - Patient in an Intensive Care Unit.
  - Patient in a cancer or transplant wards.
  - You have undergone surgical procedures such as abdominal or chest surgery.
  - You have a medical device that stays in for some time, such as a urinary catheters or central intravenous catheters.

SYMPTOMS

You may have no symptoms if VRE remains only in your intestines or on your skin. When symptoms are present, depend on what part of the body has the infection. For example:

- Patients with urinary tract infections may have frequent and painful urination. They may also have:
  - Blood in the urine.
  - Pus in the urine.
  - Fever.
  - Chills.
  - Side pain.
- Patients with infection in the abdomen (example, an abscess after the bowel or intestine ruptures or leaks) or blood stream may have:
  - Abdominal cramps or pain.
  - Nausea.
  - Vomiting.
  - Fever.
  - Sweats and chills.
- Infections following surgery may cause redness, pain, swelling and drainage at the incision or wound site.

DIAGNOSIS

Cultures of blood, urine, pus from an abscess or wound drainage are used to find out if someone has a VRE infection. Other tests (such as x-rays, ultrasound, and special imaging) may be done as part of the process of determining the reason for pain, fever, and other symptoms. When cultures grow the VRE bacteria, these

results can help your provider choose the most effective antibiotic treatment for your infection.

TREATMENT

Most VRE infections can be treated with antibiotics other than vancomycin. The treatment of VRE treatment is guided by testing the VRE causing your infection to the action or effect of different antibiotics. The safest or best antibiotic that kills the cultured VRE in a test tube is given to you. People who are *colonized* (bacteria are present, but have no symptoms of an infection) with VRE do not usually need treatment.

Because VRE can be spread from person to person, preventing the spread of it to others is an important part of treatment. VRE is usually passed to others indirectly via the hands of healthcare providers or visitors. It may also be passed from a colonized patient's gown, clothes, bedding or contaminated environmental surfaces. VRE is not spread through the air by coughing or sneezing.

HOME CARE INSTRUCTIONS

Take medications and antibiotics as prescribed by your caregiver. Antibiotics are usually safe and effective if taken correctly. Antibiotics may interact with other medicines. Tell your caregiver about all medicines, herbs, and vitamins you take. Tell your caregiver if you have had side effects from any drugs and any drug allergies you have.

Antibiotics work best if you:

- Take them exactly as directed.
- Take antibiotics for as long as your caregiver prescribes, even if you feel better. If you stop taking the medicine too soon, your infection may not be cured.
- Take only antibiotics that are prescribed for you. Do not share medicines with other people.
- Never use leftover antibiotics.

Many antibiotics have side effects. The most common are:

- Upset stomach.
- Diarrhea.
- Rashes.

Ask your pharmacist if it is okay to take the antibiotic with food and/or milk. Taking medicines with meals may lessen the chance that they will upset your stomach. Some antibiotics should not be taken with milk or food. If you have side effects, do not stop taking the antibiotic. First call your provider or pharmacist for advice.

If you or someone in your household has VRE, the following are some measures to prevent spread of VRE:

- Always wash your hands thoroughly after using the bathroom and before preparing food. Wash your hands with soap and water or use an alcohol-based hand disinfectant both before and after you care for the person who has VRE.
- Frequently clean areas of your home, such as your bathroom, that may become contaminated with VRE. Use a household disinfectant or a mixture of one-fourth cup bleach and one quart of water to clean those areas and surfaces that are touched frequently.
- Wear gloves if you may come in contact with body fluids that may contain VRE, such as stool. Always wash your hands or use an alcohol-based hand disinfectant after removing gloves.
- Be sure to tell any healthcare providers that you have VRE so that they are aware of your infection.

SEEK MEDICAL CARE IF:

- Symptoms of infection (see SYMPTOMS above) do not seem to be improving after 2 to 3 days.
- You develop new symptoms such as new or different pain, nausea, diarrhea, problems with urination, etc.
- You feel that your prescribed medication is causing problems (such as stomach pains or vomiting).

SEEK IMMEDIATE MEDICAL CARE IF:

- Pain is not adequately relieved with pain medication prescribed or becomes severe.
- An oral temperature above 101° F (38.3°C) develops.
- Repeated vomiting occurs.
- You develop lightheadedness, unusual weakness or feel that you might pass out.
- You develop chest pain or any difficulty breathing.

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