Vibrio vulnificus Death in Washoe County

The District Health Department is currently investigating a fatal case of *Vibrio vulnificus* septicemia in a 46-year-old Hispanic male resident of Washoe County.

On August 5, 2002, the case had onset of fever, chills, abdominal pain, and muscle cramps. On August 4, he had eaten a seafood cocktail prepared by a local restaurant. On August 6, he presented to a local emergency room because of a fever of 100.7°F and increasing abdominal pain. He reported a history of cirrhosis due to hepatitis C and was under treatment for same. Possible spontaneous bacterial peritonitis and thrombocytopenia were diagnosed, and the patient was admitted to the intensive-care unit (ICU) the following morning. The case developed bilateral leg cellulitis followed by hemorrhagic bullous lesions and septic shock. In the ICU, therapy was initiated with Levaquin and cefazatin. On August 8, antibiotic therapy was changed to doxycycline and ceftazidime. On August 9, *V. vulnificus* was isolated from a blood sample obtained from the patient on admission, and ciprofloxacin was added to his therapy. On August 10, he died. The source of this infection is currently under investigation. Although all items contained in the seafood cocktail consumed by this case prior to illness onset were cooked, the possibility of cross-contamination from raw oysters also served by the restaurant is being investigated. Cultures of food samples obtained from the restaurant are pending.

On August 19, 1999, a 31-year-old male Hispanic resident of Washoe County was hospitalized with *Vibrio vulnificus* septicemia. He had eaten twelve raw oysters at a Sparks restaurant on August 14, 1999. This case also had pre-existing hepatic disease due to chronic hepatitis C infection. He experienced severe hepatic failure from the *V. vulnificus* septicemia and was discharged to a California hospital to await a liver transplant.

Infection with *V. vulnificus* in healthy persons can cause watery diarrhea, abdominal pain and vomiting. However, serious illness can occur in persons with underlying disease or who are immunocompromised. At most risk for severe illness are persons with:

- liver disease from excessive alcohol intake or viral hepatitis,
- diabetes, cancer, hemochromatosis,
- immune disorders and long-term steroid use, and
- stomach disorders such as surgery or medications taken to lower gastric acidity.

In the high-risk group, *V. vulnificus* is often characterized by primary septicemia. One-third of patients are in shock when they present for care or within 12 hours of hospitalization. This is often accompanied by thrombocytopenia and evidence of disseminated intravascular coagulation. About 75% of patients have bullous skin lesions that range from mild lesions to rapidly progressive cellulitis and myositis. Surgical amputation of gangrenous limbs is often required. Infection with *V. vulnificus* requires antibiotic treatment. The course of illness is often rapid and about 50% of cases are fatal.

Infection with this organism is acquired by ingestion of raw or undercooked seafood, particularly oysters. Cases are most commonly reported during warm-weather months (April – November) when *V. vulnificus* can be isolated routinely from oysters.
Oysters are harvested legally only from waters free from fecal contamination; however, they still may be contaminated with *Vibrio parahaemolyticus* or *V. vulnificus* because these bacteria are naturally present in the marine environment. Some suggestions for preventing *V. parahaemolyticus* and *vulnificus* infections are:

♦ Do not eat raw oysters or other raw shellfish, especially when a pre-existing medical condition is present.

♦ Cook shellfish thoroughly--either boil until the shell opens and for 5 minutes after or steam until the shells open and then continue cooking for 9 more minutes. Do not eat shellfish that do not open during cooking. Boil shucked oysters at least 3 minutes, or fry them in oil at least 10 minutes at 375°F.

♦ Avoid cross-contamination.

♦ Eat shellfish promptly after cooking and refrigerate leftovers.

♦ Avoid exposure of open wounds or broken skin to warm salt/brackish water, or to raw shellfish harvested from these waters.

♦ Wear gloves when handling raw shellfish.

Health care providers are encouraged to educate their high-risk patients of the above prevention methods.

*Vibrio* species can be isolated from stool, wounds, or blood; the laboratory should be notified of the suspected organism since special media can be used to enhance the growth.

Although not listed as a reportable communicable disease, *Vibrio* infections should be reported to the District Health Department by health-care providers and laboratories within one working day of identification of the case or suspected case as an “extraordinary occurrence of illness” (NAC 441A.085).

Laboratories are asked to send isolates of *Vibrio* species to the Nevada State Public Health Laboratory for confirmation and additional testing that may be needed.

For more information, call the Communicable Disease Program at (775) 328-2447.

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**Update on Primary Syphilis in Washoe County**

The Washoe District Health Department has investigated this year’s second case of primary syphilis. This recent male case also reports sex with a male as a risk factor. The case presented with an open lesion on the penile shaft and an RPR of 1:32.

Physicians are encouraged to consider syphilis in the differential diagnosis of patients presenting with lesions or rash. Please see **Physician Alert dated June 12, 2002** for details on diagnosis and treatment of syphilis.

For more information on syphilis testing and treatment, call Gloria Laxamana, RN, Disease Intervention Specialist at (775) 328-2474 or Kathy Hong, RN, Disease Intervention Specialist at (775) 328-2475.