Answer to Unknown Gram negative fastidious bacilli:

While patient was in the hospital on day six his blood culture was positive for Capnocytophaga. Capnocytophaga is a gram-negative fastidious bacilli in the oral flora of dogs and cats. It can cause bacteremia, meningitis, endocarditis, lung abscess and osteomyelitis. Asplenic patients and alcoholics are at particularly high risk of fulminant sepsis. We present a case of fulminant sepsis due to infection with Capnocytophaga resulting from a dog bite in an asplenic, alcohol dependent male.

Asplenic and alcoholic patients are at particularly high risk for infections from encapsulated organisms such as Capnocytophaga. We have presented a case of fulminant sepsis from Capnocytophaga in an asplenic, alcohol dependent patient. Capnocytophaga can cause fatal conditions and particular attention is needed if patient is immunocompromised, asplenic, alcoholic or has cancer. Expected clinical signs and symptoms include fever, chills, myalgia, headache, malaise, vomiting, diarrhea, abdominal pain, dyspnea and confusion. Our patient presented with fever, vomiting, diarrhea, abdominal pain and confusion. Previous case reports of Capnocytophaga have included septicemia, disseminated intravascular coagulation, peripheral gangrene, septic shock and death in asplenic patients. The successful treatment of infection with Capnocytophaga has been seen with many antibiotics including penicillin, erythromycin, clindamycin, cephalosporins, amoxicillin, fluoroquinolones, imipenem, and tetracyclines.

We are familiar with encapsulated organisms like Streptococcus pneumoniae, Haemophilus influenza and Neisseria meningitides in post splenectomy patient and this case emphasize the importance that Capnocytophaga should be suspected early to prevent fatal outcomes.

Teaching Points

This case illustrates 3 major teaching points:
1. The successful treatment of infection with Capnocytophaga has been seen with a wide array of antibiotics
2. In asplenic patients, Capnocytophaga should be suspected early to prevent fatal outcomes.
3. Animal bites should be considered serious in asplenic and alcoholic patients and physicians should consider Capnocytophaga as causative organism of overwhelming post splenectomy infections.

References:

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Biography:

The author is a PGY3 Internal Medicine resident at the University of Nevada School of Medicine-Reno and a UNSOM-Reno certified mentor for medical students. The author's areas of interest include patient education and quality improvement.