

## Purpose

Dog bites are usually not life-threatening. Nevertheless, wound infection can occur due to one or more of the many bacterial species in the mouths of dogs. One of these organisms is *Capnocytophaga canimorsus*, which can lead to sepsis and death. We report a case of a man who did not seek medical care for a dog bite and who later presented with septic shock from *C. canimorsus*. It is paramount for clinicians to insist upon timely evaluation and preventive treatment of all dog bites.

## Description of a Case

AJD was a 40-year-old man whose left hand was bitten by canine pet. He felt the bite was trivial and did not seek medical attention. Two days later he presented to the ED with abdominal pain, nausea and vomiting, headache and fatigue. He had a history of type 2 diabetes for which he was taking metformin. He did not smoke or drink.

## Physical Examination

Physical exam revealed a lethargic middle-aged man who was not oriented to year. Vital signs: T 100°F; P 156 beats/min; R 28 breaths per min; BP 93/56; SpO2 96% on RA. His abdomen was diffusely tender but there were no peritoneal signs. He had 3 puncture wounds on the dorsolateral aspect of his left hand, but there was no drainage. His hand was neither swollen nor red. Neck was supple and cardiopulmonary exam was unremarkable. He had no rashes. He was given IV fluids and IV vancomycin and meropenem.

## Laboratory Results

CBC was normal except for a platelet count of 7,000 per microL (150,000-450,000). INR was 2.5 (0.8-1.1). Na, Cl, and K were normal, but anion gap was 33 (4-12). Creatinine was 2.3 mg/dL (0.6-1.3); eGFR was 36 ml/min (90-120).

## Laboratory (continued)

Bilirubin was 4.4 mg/dL (0.1-1.2). Venous pH was 7.12 (7.31-7.41) with normal PCO2 but HCO3- was 15 meq/L (22-27). Lactate was 12 mmol/L (0.5-2). CT of the brain and abdomen were normal except for adynamic ileus.

## Clinical Course

His mental status deteriorated further and he became hypoxemic and frankly hypotensive. He required intubation and mechanical ventilation as well as vasopressors to maintain adequate blood pressure. Blood cultures grew *C. canimorsus*. He was switched to IV ampicillin/sulbactam. Hemodialysis was required for acute tubular necrosis, and he also developed disseminated intravascular coagulation which required fresh frozen plasma, cryoprecipitate, and platelet transfusions. Over several days, he gradually improved and ultimately recovered.

## Conclusions



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This patient's near fatal outcome was caused by a relatively minor dog bite, but one that infected him with an unusually virulent microbe present in the mouth flora of dogs. In retrospect, "an ounce of prevention" would likely have prevented a month-long battle in the ICU. But it is easy to be complacent about common animal bites, especially from pets. But any animal bite requires prompt medical attention, which often requires antibiotic prophylaxis in addition to tetanus vaccination and a consideration of rabies prophylaxis depending on case details.