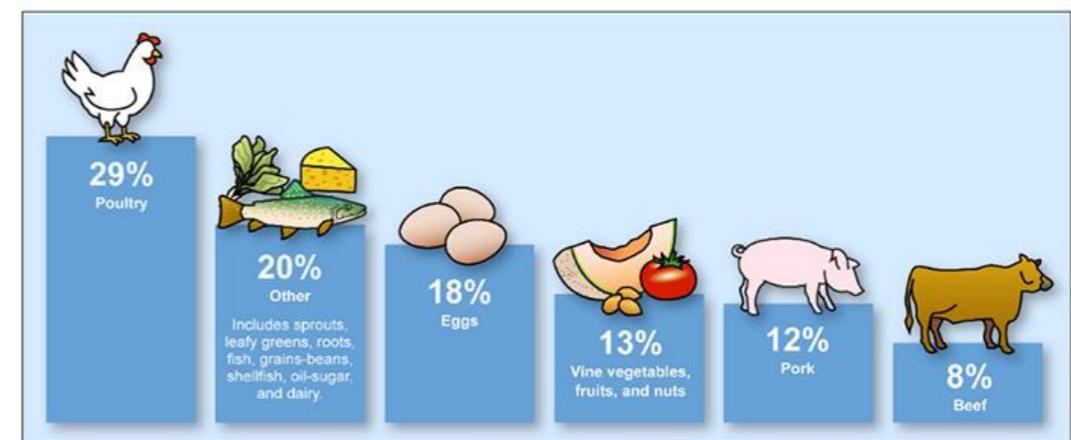


A Rare Complication of Salmonella Enteritis

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Introduction

- Salmonella enteritis is a major cause of diarrhea world wide.
- One of the most common pathogens for food borne illness in the United States.
- Extra intestinal manifestations such as bacteremia, meningitis, pneumonia, osteomyelitis, septic arthritis, and endocarditis.



Source: GAO figure derived from Centers for Disease Control and Prevention data. | GAO-14-744

The Case

- 17 year old male admitted with sepsis and acute onset bloody diarrhea.
- PMHx: Type II Diabetes Mellitus, Hypertension, Hypothyroidism, OCD, Bipolar type I, ADHD.
- Initially seen at outlying hospital where stool cultures were collected. Transferred due to severe sepsis.
- At admission the patient reported having nausea, vomiting and bloody diarrhea for two days.
- He experienced a total of twenty bowel movements on the day of his admission.

The Case

- Recent salmonella exposure with close family contact.
- Patient's grandmother at the time was admitted to the ICU with acute renal failure secondary to salmonella enteritis.
- Stool cultures were collected at outlying hospital.
- Infectious disease consulted for suspected salmonella enteritis.

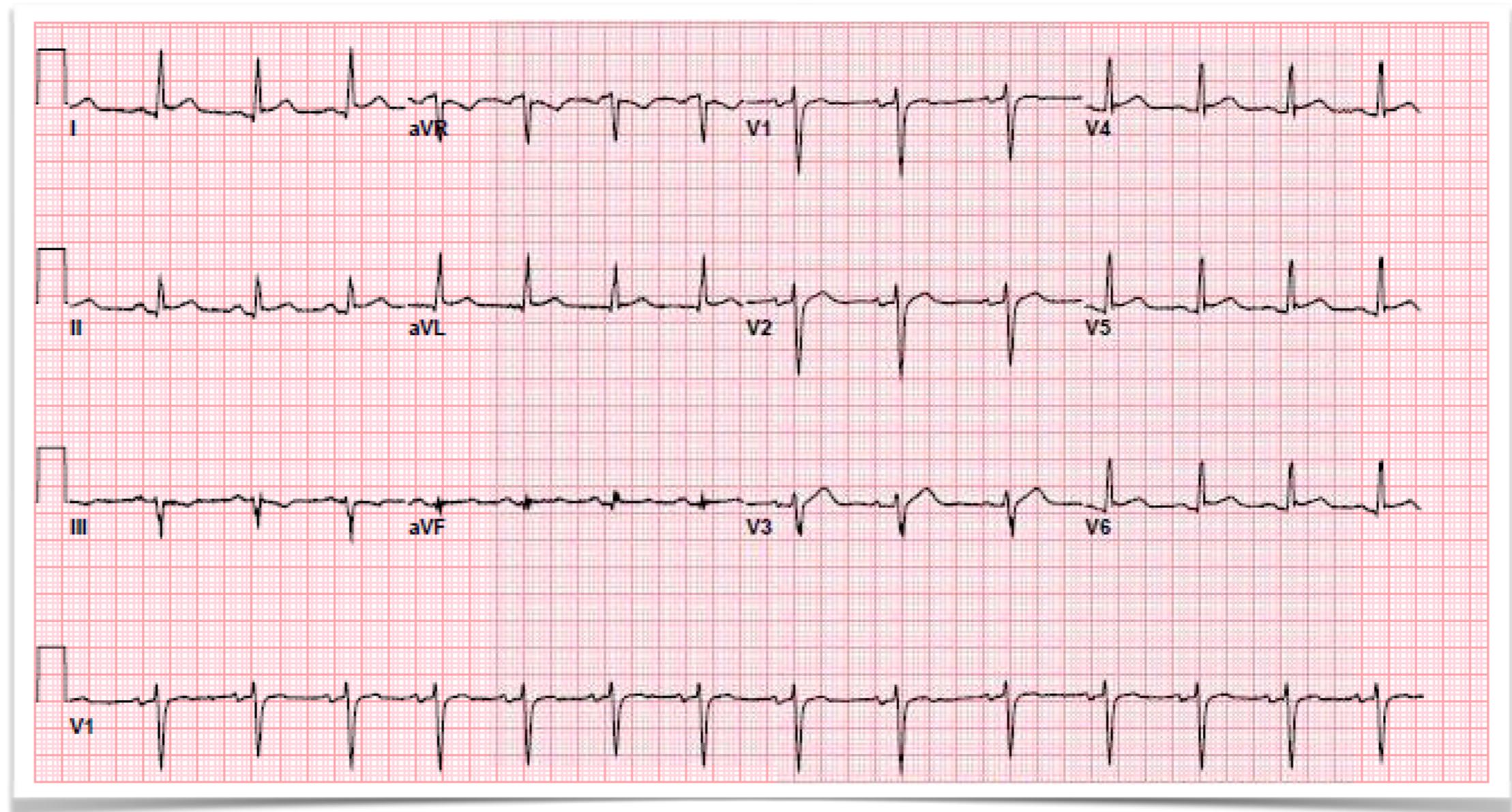
Day 1

- Patient started on IV Ceftriaxone and fluid replacement.
- Patient continued to have multiple bloody stools with nausea, vomiting and abdominal pain.
- Stool cultures return from outlying hospital and are positive for Salmonella.

Day 2

- New onset chest pain overnight. Described to be non-radiating, sub-sternal chest pain that occurred suddenly and was worse with walking, standing and laying flat. Vitals were stable.
- Patient examined by on call resident and determined to be musculoskeletal based on exam findings secondary to frequent emesis.
- Patient's pain persisted and a ECG with cardiac enzymes were ordered to rule out any cardiac pathology.

ECG



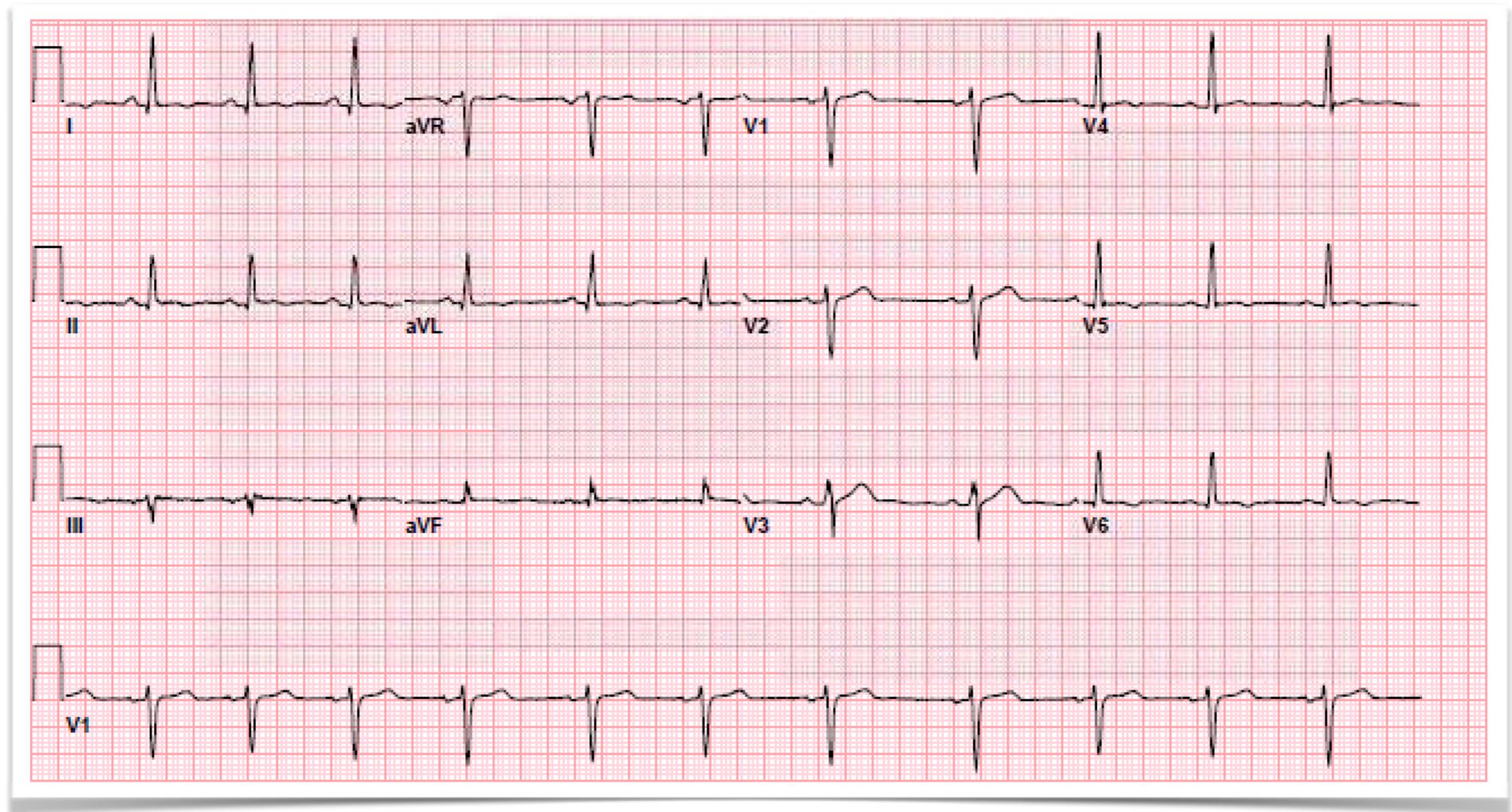
Cardiac Work Up

- Troponin level: 12 (N: < 0.040 ng/ml)
- CK MB level: 29.2 (N: 0.5 - 3.6 ng/ml)
- Cardiology consult placed and a transthoracic echo is ordered.
- Echo result without any pericardial effusion and normal.

Treatment and Response

- Patient started on Indomethacin 25 mg three times a day.
- Chest pain persisted but became transient, migratory and worse with sitting up in bed; fairly atypical symptoms for pericarditis.
- Cardiac enzymes were trended every 6 hours and noted to start down trending.
 - Troponin number two: 8.770 (N: < 0.040 ng/ml)
 - Troponin number three: 5.610 (N: < 0.040 ng/ml)
 - Troponin number four: 2.980 (N: < 0.040 ng/ml)

Repeat ECG



Follow Up

- Patient discharged home on Aspirin 325 mg qd.
- Patient is seen by Cardiology post-discharge and has repeat cardiac testing.
- ECG and echocardiogram noted to be normal.
- Patient remained asymptomatic without recurrence of chest pain.

What is the diagnosis?

- Due to the patient's salmonella enteritis, clinical symptoms and abnormal cardiac testing, a diagnosis of **myopericarditis** was established.
- **Myopericarditis** is a rare but known complication of salmonella enteritis.
- Only a few cases reported in literature search.

Discussion

- Salmonella are gram negative bacteria.
- Enter the human body via food borne transmission, most commonly from undercooked eggs, meats and chicken.
- Salmonella can cause many types of infections such as gastroenteritis, bacteremia, focal infections such as abscesses and osteomyelitis and endocarditis.
- A very rare complication of salmonella enteritis are myopericarditis, associated arrhythmias and infected aneurysms.

Conclusions

- It is rare!
- Serious complications.
- Sometimes more than NSAIDs are needed.
- Treat the bacteria.

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