Cardiac Case Presentation

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Coordinator

FINANCIAL DISCLOSURE:
No relevant financial relationship exists

The Patient

- 43 year old male
- No significant past medical history
- No daily medication
- No recent surgery
- Does not use drugs
- Nonsmoker, does use chewing tobacco 1 can a day for years
- Family history is unremarkable
- Started having chest pain the evening before presenting to CAH. Describes it as bilateral and low

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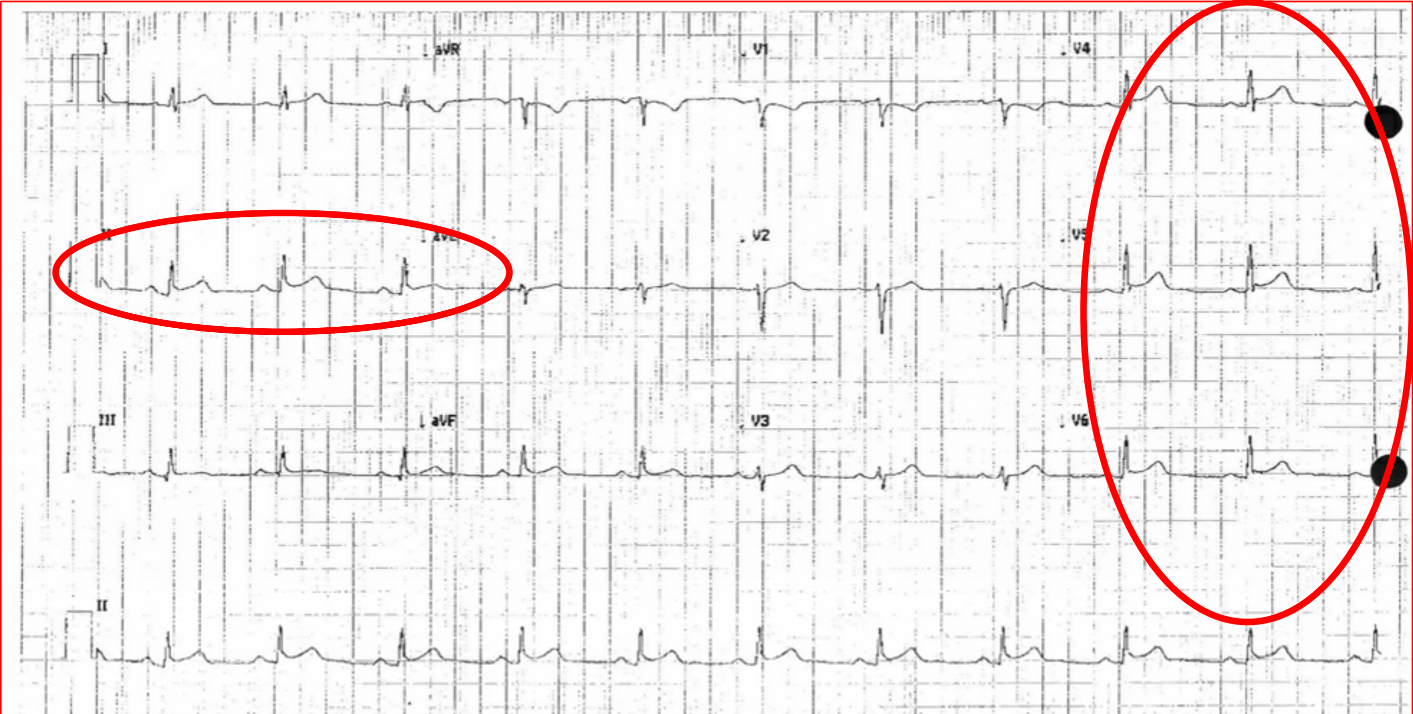
Initial EKG



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At the Critical Access Hospital

- Initial VS 106/75-83-16-95% RA. Afebrile.
- 2-20g SL's are started.
- Initial EKG is thought to reflect a STEMI, because of inferior and lateral changes. Troponin is elevated.
- Concerned that there is something cardiac happening.
- SL Nitro (symptoms seem to improve after Nitro is given), Zofran, Normal Saline bolus, ASA, Heparin bolus and drip
- Patient transferred by air to Trinity Health ER.

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Lab Results

WBC 9.97 / 11.61
RBC 4.25
HGB 13.1 / 12.5
HCT 37.2 / 35.4
Platelets 188
BUN 14.0
Creatinine 1.0
Calcium 8.3
Potassium 3.4 / 3.3
Sodium 135 / 134
AST 196 / 178

CK 1611
CKMB 235 / 272
Troponin 31.16 / 47980
COVID-
Influenza A/B-
TSH 0.36
Ferritin 809.1
Iron 31.0
D-Dimer 23000

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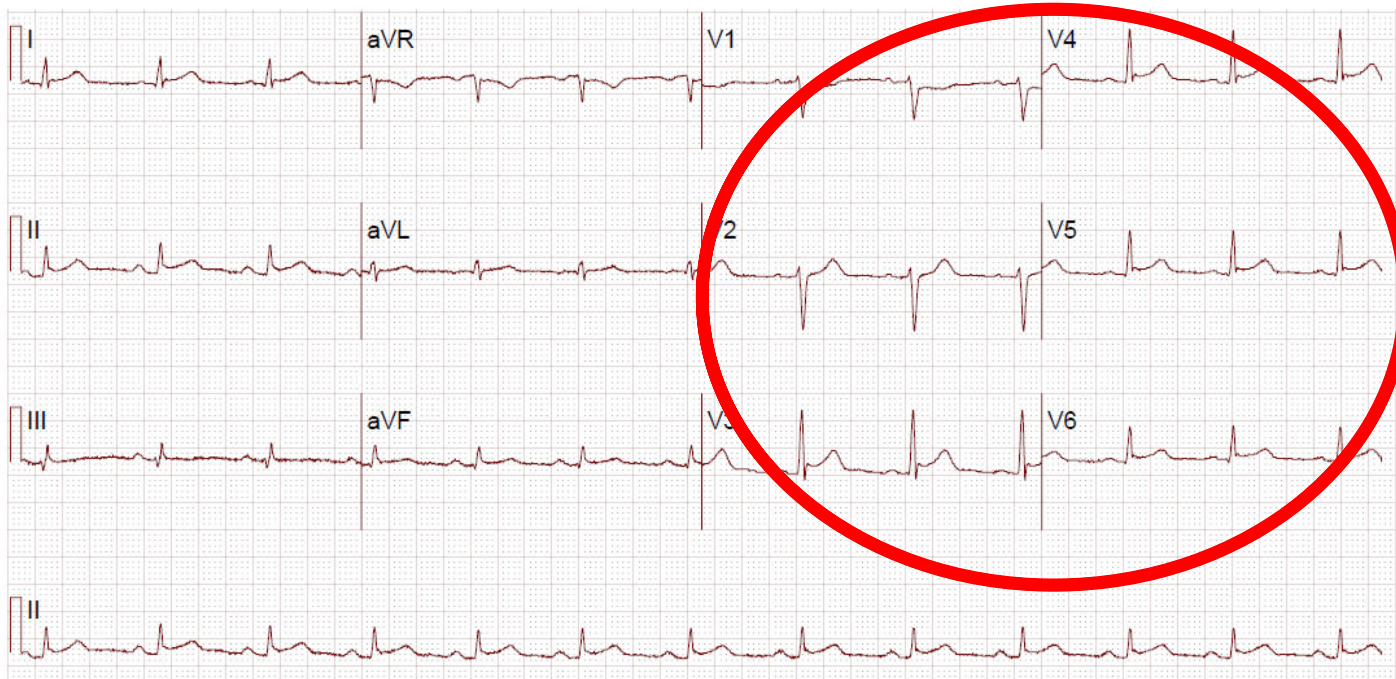
Repeat EKG was done after Transfer

Repeat EKG shows non-diagnositc inferior Q-waves. There are ST segment changes laterally but they do not meet STEMI criteria. This is not worsening.



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Further investigation

- Denies previous heart disease, anginal symptoms, and palpitations.
- There is no exertional weakness or shortness of breath.
- There is vague discomfort present intermittently over the past several months, seems to worsen with work, better with rest.
- No upper respiratory issues. Denies congestion, cough, sore throat.

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Further investigation Continued…

- No exposures to COVID that he knows of.
- Currently chest pain free
- Patient relayed to the Cardiologist that for the past 5 days he has been having fevers as high as 104.
- He has also been having intermittent vomiting and diarrhea.

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Testing Completed

- Ultrasound Gallbladder for suspected Cholecystitis.

This was a negative test.

- Chest XR

bibasilar ground glass infiltrate likely represents interstitial pneumonia. COVID test was negative.

- US Echocardiogram.

Ejection Fraction is estimated at 60%, this is unchanged from previous exam. Abnormalities in the inferior wall.

Testing Continued….

- CT abdomen/pelvis is done for fever and bacteremia.

There are bilateral pleural effusions, minimal pericholecystic inflammatory, lymphadenopathy, stigmata of gastroenteritis.

- Blood Cultures were drawn.

Both sets came back positive for gram negative rods.

- CT angiography chest done for tachycardia, chest pain, decreasing oxygen saturations.

This shows no pulmonary embolus, no dissection, no aneurysm. There is bilateral pneumonia.

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Cardiology consult:

- First EKG done in the ER showed sinus rhythm at a rate of 75 beats with diffuse ST segment abnormalities, this is strongly suggestive of pericarditis or early repolarization. Repeat EKG shows similar findings.
- Patient is febrile at 101 degrees.
- Concern that this is viral pericarditis with myocarditis resulting changes noted.
- There are segmental wall abnormalities noted on ECHO involving the inferior wall. This needs to be investigated further.
- In respect to the gram-negative blood cultures, the source is unclear. Urine did not show abnormalities, gallbladder was negative, Potential that this could be from pneumonia.
- Strongly recommend obtaining viral titers including Coxsackie and coronavirus titers.
- Obviously treat the gram-negative sepsis.

Continued Patient care

- Patient had to be transferred to the ICU for respiratory failure and fluid overload. Patient was treated with IV Furosemide and High Flow oxygen
- Patient was already on IV Meropenem for antibiotics.
- Blood cultures came back with salmonella.
- Stool cultures are positive for salmonella species.
- Patient is now said to have salmonella sepsis, salmonella enteritis, and salmonella myocarditis.
- Antibiotics are changes due to sensitivity.
- Patient will need to be treated with long term IV antibiotics.

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The pieces

- Patient began raising chickens less than a year ago.
- At some point patient ingested salmonella some way some how.
- Patient was having repeated exposure to the chickens and the droppings. This lead to the waxing and waning of symptoms. Until the infection was to much for his body.

Conclusion

Patient was discharged home with a PICC line so that he could continue IV antibiotics.

He was seen by both Infectious Disease and Cardiology

After 1 month all blood and stool cultures were free from Salmonella, Infectious Disease deemed him cleared.

Cardiology saw patient twice. Patient was maintained on ACE, beta-blocker, high intensity statin, ASA. Patient occasionally gets palpitations and some fatigue. Patient had a stress test to assess for any areas of ischemia. There were none. The ejection fraction was maintained.

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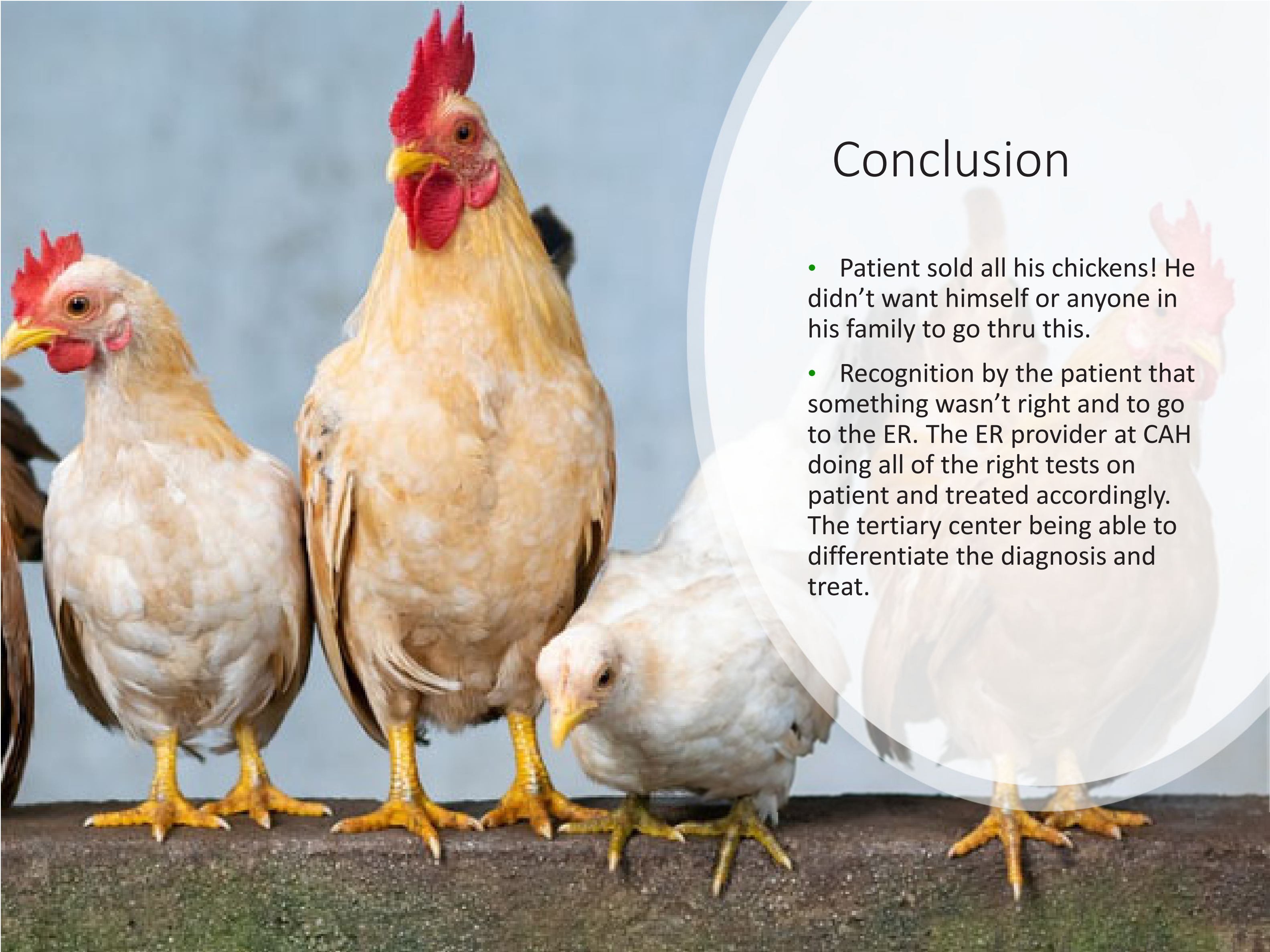
Conclusion
• Patient sold all his chickens! He didn't want himself or anyone in his family to go thru this.
• Recognition by the patient that something wasn't right and to go to the ER. The ER provider at CAH doing all of the right tests on patient and treated accordingly. The tertiary center being able to differentiate the diagnosis and treat.
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QUESTIONS???

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