

Neisseria gonorrhoeae Infective Endocarditis

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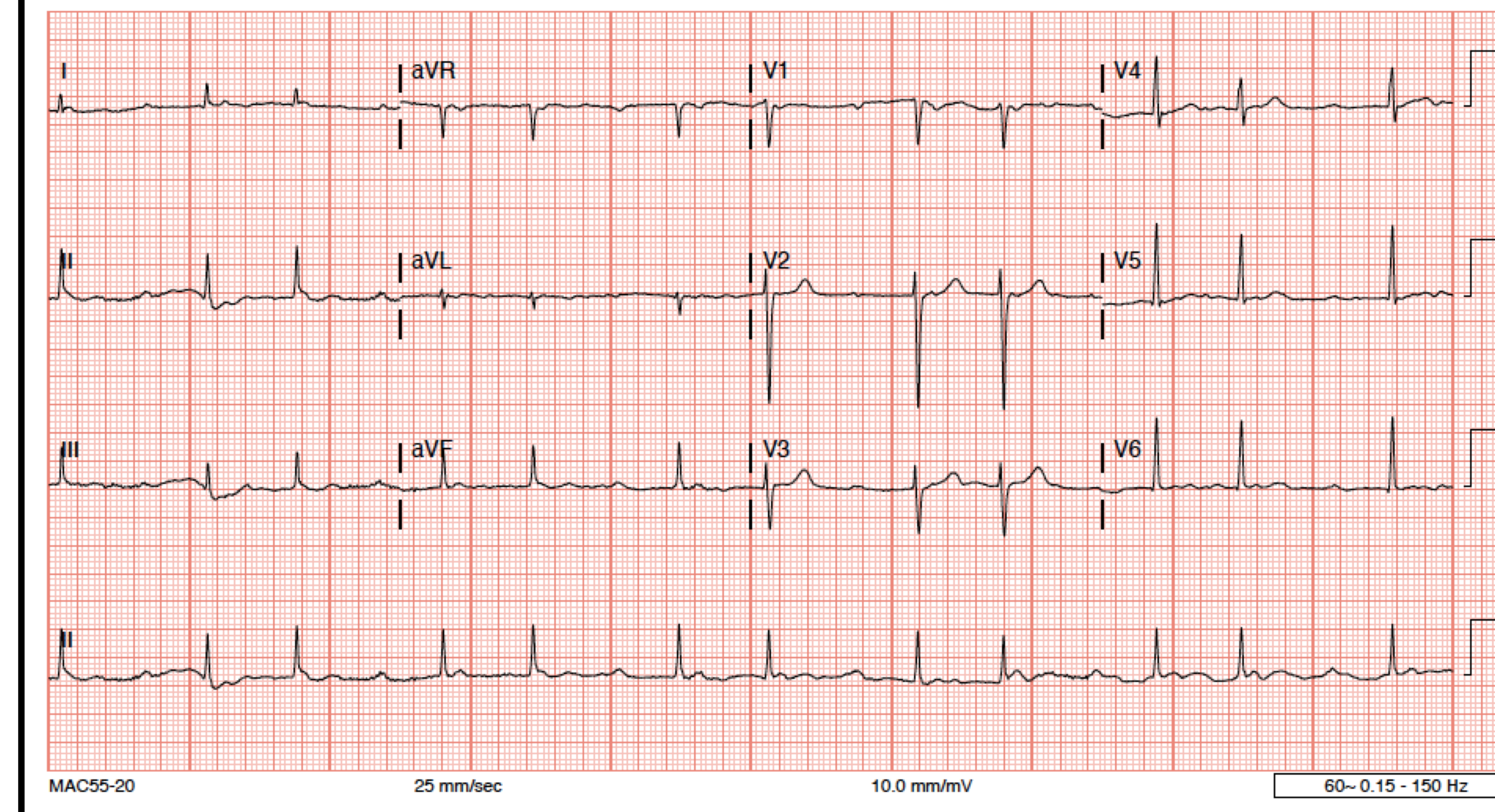
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Introduction

- Gonococcal endocarditis (GE) is a very rare complication of disseminated gonococcal infection (DGI), with only 38 cases reported from 1980 to 2014.
- In 2018, a total of 583,405 cases of gonorrhea were reported in the United States, yielding a rate of 179.1 cases per 100,000 population (a 63% rate increase from 2014).
- DGI occurs in 0.5 – 3% of patients infected with *N. gonorrhoeae*.

EKG



Case Presentation

A 50-year-old male was transferred from an outside hospital (OSH) for treatment of acute aortic valve insufficiency secondary to infective endocarditis seen on transesophageal echocardiography (TEE).

Four months prior to presentation:

- He had received and performed oral sex with a male whose health status is unknown.

Six weeks prior to presentation:

- He noticed a cough with sinus congestion that did not resolve.

Four weeks prior to presentation:

- He developed progressive shortness of breath and subsequent fevers and chills.

The patient mentioned a prior DGI 20 years ago. At no point during this illness did he experience urethritis, penile discharge, arthritis/arthralgias, tenosynovitis nor dermatitis.

On initial presentation, he was febrile, tachycardic, tachypneic, and ill-appearing. A diastolic murmur was auscultated at the left lower sternal border with bounding pulses consistent with water hammer pulses.

An electrocardiogram was consistent with type one second degree AV-nodal heart block as shown above.

Transesophageal echocardiography found a tri-leaflet aortic valve with severe aortic regurgitation and vegetations on all three leaflets with mild aortic thickening concerning for small aortic root abscess.

Blood cultures were drawn prior to antibiotics at OSH. After six days, one out of three cultures grew *N. gonorrhoeae*.

Intraoperative findings confirmed aortic valve vegetations but no evidence of aortic root annular abscess.

Conclusions

- The patient received an aortic valve repair and six weeks of intravenous ceftriaxone with resolution of his symptoms.
- Gonococcal Endocarditis (GE)
 - Aggressive, commonly requiring surgical intervention with a mortality of 23%.
- Native valves are affected with the aortic valve more frequently involved than the mitral valve.
- In two thirds of cases of GE:
 - Primary gonococcal urethritis is absent.
 - Classical DGI symptoms of Tenosynovitis/arthritis-dermatitis are present.
- Blood cultures of *N. gonorrhoeae* are difficult to culture due to fastidious nature.
 - Blood cultures are positive in 90% of GE cases compared to 10-30% of cases of DGI.
- The increasing incidence of gonorrhea infection in our communities, along with the high mortality rate of GE, it is imperative to conduct a thorough history, including a sexual history, to identify patients at risk for endocarditis due to atypical organisms.

References

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