



When Clean Turns Contaminated: A Case of Endocarditis Due to Exposed AICD Leads

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BACKGROUND

Cardiovascular implantable electronic device (CIED) infections are life threatening and often difficult to diagnose and treat due to variability in presentation. In this unique case, an exposed AICD lead with purulent drainage prompted investigation and diagnosis of *Pluralibacter gergoviae* device endocarditis - a pathogen generally found as a cosmetic contaminant and rarely a human pathogen.

CASE PRESENTATION

A 73-year-old male with chronic medical conditions of chronic systolic heart failure and recurrent ventricular tachycardia requiring automatic implantable cardioverter defibrillator (AICD), presented for an exposed AICD lead wire in clinic.

Over time, he developed a "pimple" on his chest, which he scratched open, eventually exposing a lead wire followed by purulent drainage. He washed the area with body soap with the intention of keeping the area clean. The patient developed malaise, fevers, and ultimately was hospitalized with septic shock requiring vasopressor support.

FIGURE 1



Exposed right ventricular lead with associated purulence on the left anterior chest wall.

FIGURE 2



Mobile 13mm x 17mm hyper-echoic structure found within the RA chamber.

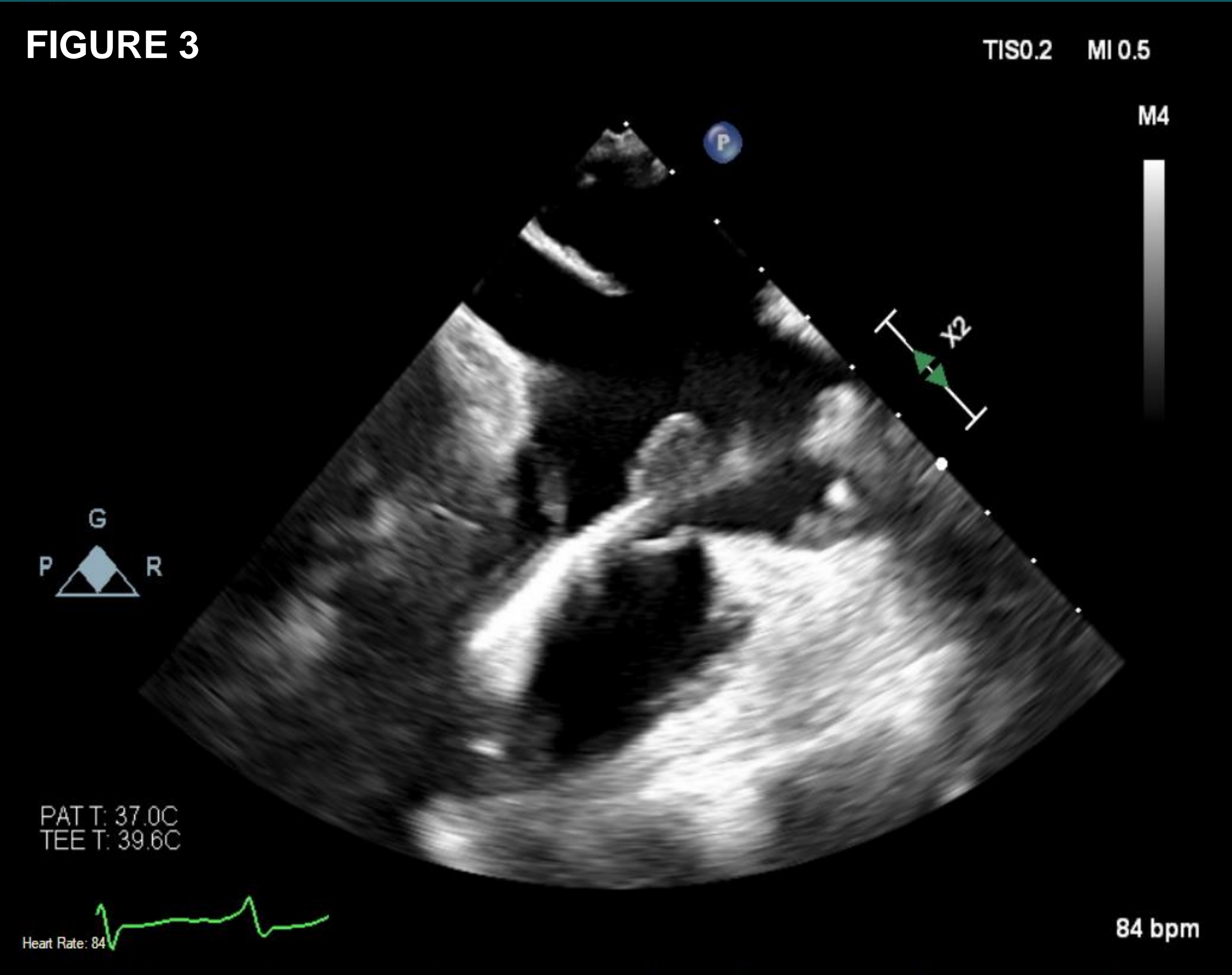
DISCLOSURE INFORMATION

The authors have no disclosures.

Pluralibacter gergoviae is typically a **cosmetic contaminant** or nosocomial infections in **immunocompromised** hosts

Exposed hardware can be a **nidus for infection**, despite the effort to **maintain cleanliness**, which can ultimately lead to **severe systemic infections**

FIGURE 3



There are two leads transversing from SVC into RA and RV apex (RV leads) and another lead attaching inferior to RA appendage (RA lead). One of the two RV leads is encased in presumed biomass throughout the entire visualized portions from SVC to RV and has a mobile hyper-echoic structure attached in RA chamber without tricuspid valve involvement.

MANAGEMENT

Blood cultures obtained on admission grew *P. gergoviae* and patient was promptly initiated on antibiotics. Due to concern for endocarditis, transesophageal echocardiogram was performed, showing an RV lead encased in vegetation, but with no valvular involvement.

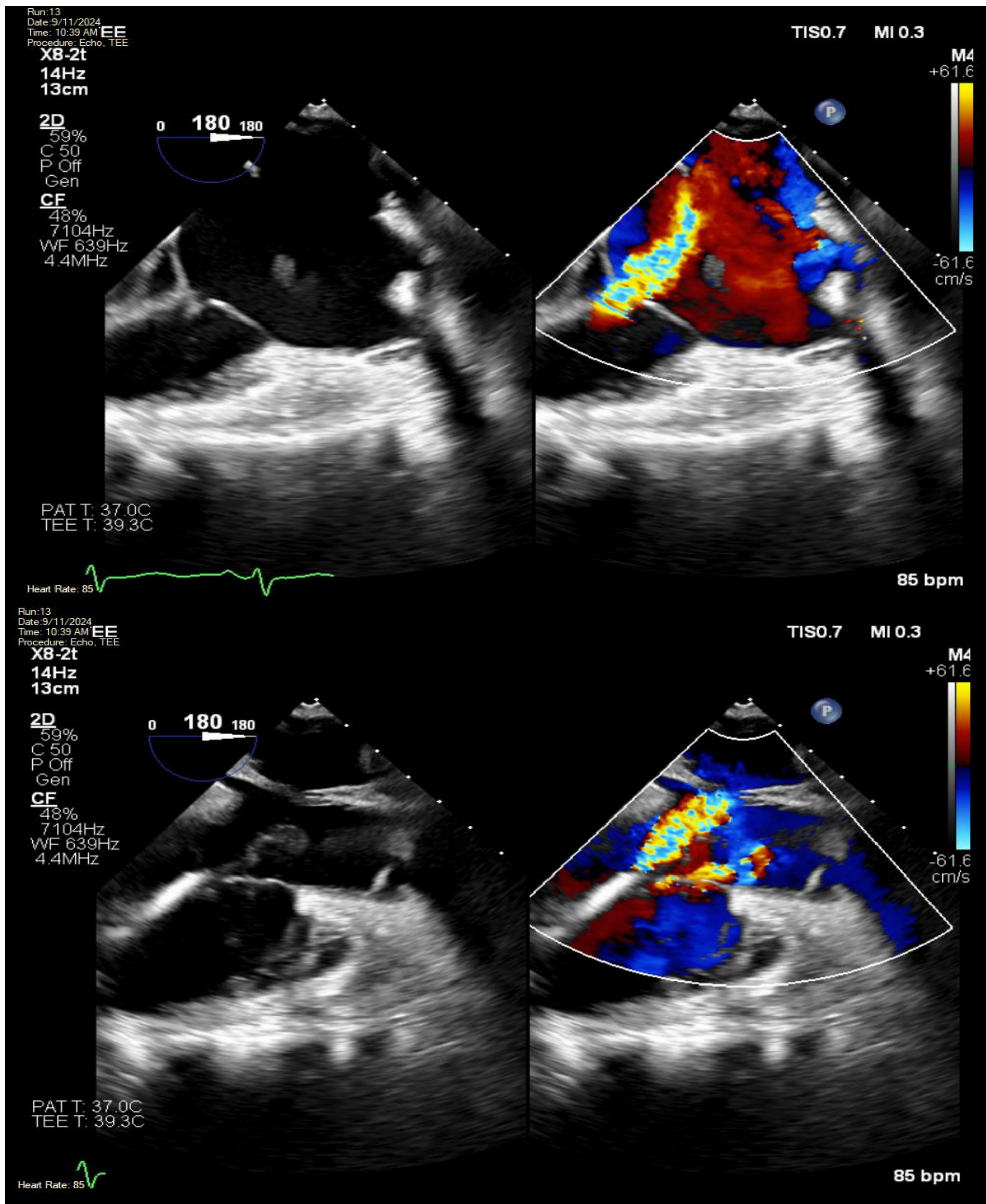
Transvenous whole system extraction was completed. Patient condition significantly improved after successful extraction, and he was discharged with a six-week course of antibiotics.

CONCLUSION

P. gergoviae is an uncommon human pathogen however, it can rarely present as a cosmetic contamination.

The patient's exposed wires with purulence in addition to septic shock and bacteremia raised suspicion for endocarditis allowing for a targeted investigation leading to early detection and disease-specific treatment with intervention prior to valvular involvement despite the significantly large vegetation.

FIGURE 4



Moderate tricuspid regurgitation with a centrally directed jet noted secondary to RV lead.

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