

MISSED CASE OF INFECTIVE ENDOCARDITIS (IE)

A POSSIBLE DIFFERENTIAL TO RULE OUT IN THE ED

BACKGROUND

Infective Endocarditis (IE) is defined as an infection of the endocardial surface of the heart, which may include one or more heart valves, the mural endocardium, or a septal defect.

Its intracardiac effects include severe valvular insufficiency, which may lead to intractable congestive heart failure and myocardial abscesses.

If left untreated, IE is almost inevitably fatal.

If not treated in time, IE can prove to be quite fatal.

It is, therefore, deemed necessary to keep infective endocarditis a possible differential of fever along with meningitis and malaria in emergency settings.

WHY IS IT EASY TO MISS?

Infective endocarditis is a rare disease with varied presentations. Symptoms such as loss of appetite, weight loss, arthralgia, and night sweats overlap with much more common conditions, including occult malignancy.

Fever is almost invariable, but many patients may initially experience only a general malaise. Given the diagnostic difficulty, some 25% of patients take longer than one month to be admitted to hospital after their first clinical signs become evident.

CASE PRESENTATION

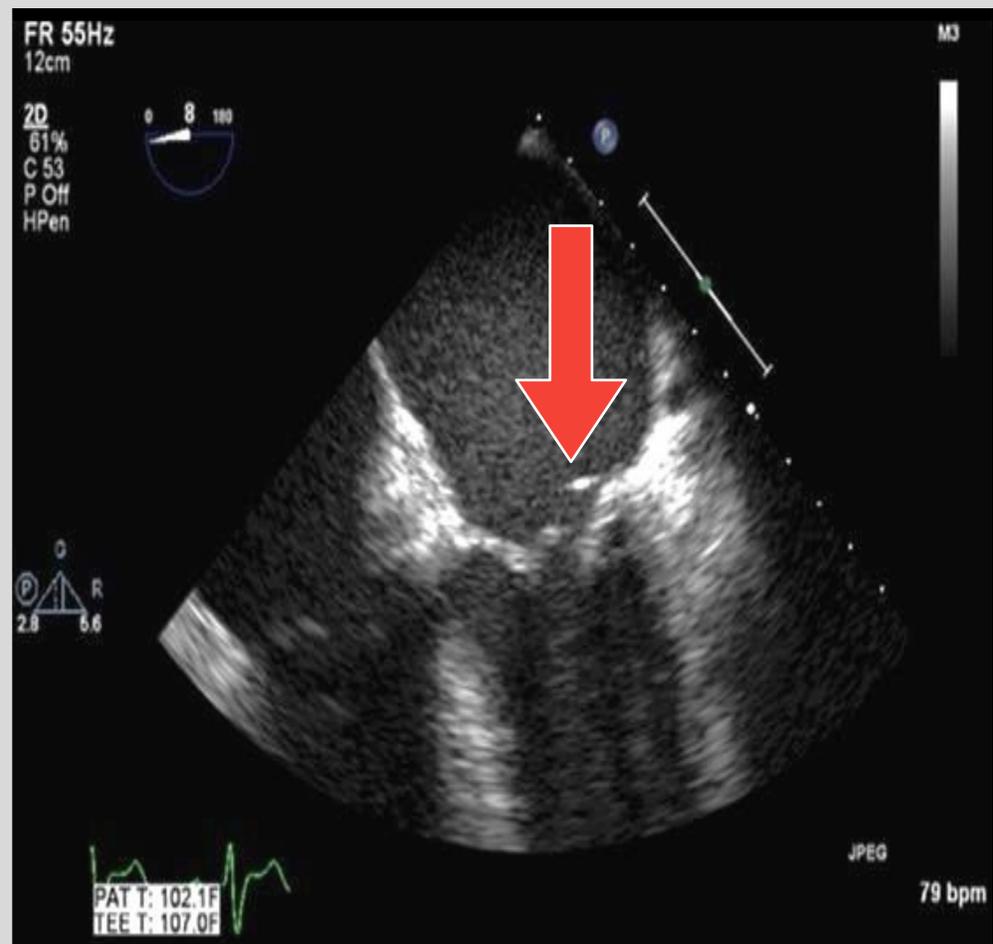
A 70-year-old man presented to A&E with intermittent fever, weak legs and significant weight loss over 3-4 weeks. He was a known case of AF and was on 20mg of Rivaroxaban.

CT CAP showed a focal wedge shaped splenic infarct with no splenic artery embolus. Blood culture came back positive for gram positive alpha hemolytic *Streptococcus Gordonii*. Transthoracic echocardiogram was non diagnostic to rule out *IE*.

Whilst on the ward, patient developed right-sided weakness. CT Head showed an acute left occipital lobe infarct (besides patient being on 20mg Rivaroxaban).

INVESTIGATIONS

1. **Blood Culture**
2. **Transthoracic Echocardiogram (TTE)**
3. **Transesophageal Echocardiogram (TEE)**



CONCLUSIONS

The diagnosis is presumed in this case, as there were no other sites of infection.

Further support for this diagnosis came from the subacute presentation – the presence of a positive blood culture (a possible complication and response to antibiotic treatment) caused the inflammatory parameters to slowly return to normal.

Although *S. gordonii* initiates dental plaque and the colonization of other pathogenic bacteria on tooth surfaces, *S. gordonii* is not directly pathogenic in the oral cavity.

On the other hand, once *S. gordonii* enters the bloodstream via oral bleeding it can colonize damaged heart valves, causing endocarditis in humans.