

Persistent Fever After Minimally Invasive Mitral Valve Surgery: A Diagnostic Dilemma.

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Introduction

Infective endocarditis, resulting from bacterial colonization of the endocardium, often precipitates valvular dysfunction, particularly mitral regurgitation, necessitating surgical intervention in severe cases. Concurrently, post-pericardiotomy syndrome, characterized by pericardial inflammation subsequent to cardiac surgery, exacerbates management complexities (1).

Case

57-year-old male was admitted to the hospital due to infective endocarditis, with symptoms including fever and shortness of breath. Complications arose due to mitral regurgitation, initially managed with medical treatment. Past medical history revealed iron deficiency anaemia stemming from colonic and gastric ulcerations, which had been appropriately treated. Subsequent echocardiograms indicated persistent progressive mitral regurgitation with valve morphology consistent with myxomatous proliferation, leading to multiple prolapses (Figure 1) and associated left ventricular dilatation and pulmonary hypertension.

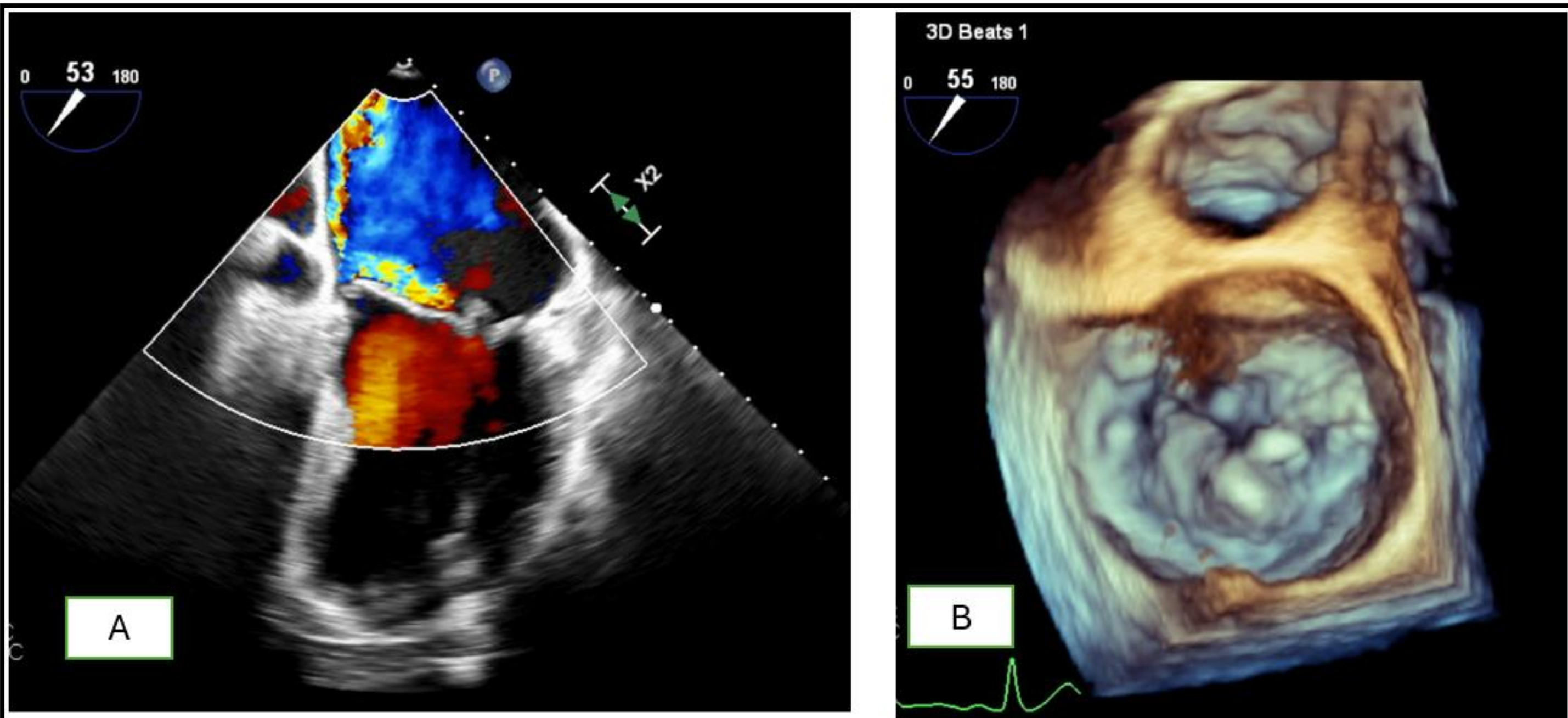


Figure (1): Transesophageal echocardiogram images, (A) Severe mitral regurgitation.(B) 3D image from the atrial side showing the valve morphology which consistent with myxomatous proliferation. (Multiple prolapse affecting P1-P3, A2&A3 scallop with Flail P2 scallop due to rupture chordae).

Surgical Correction

Consequently, surgery was deemed necessary, and a minimally invasive mitral valve repair was performed, using the modified haircut technique with three neochoorde and a 32 mm ring annuloplasty. Post repair transoesophageal examination conformed satisfactory result.

Post op and Follow up

Post-surgery, the patient developed pericardial and recurrent pleural effusions, along with atrial fibrillation and persistent fever. Despite negative cultures, an inflammatory aetiology was suspected after analysis of pleural effusion and this confirmed by PET CT scan (Figure 2), prompting treatment with a combination therapy including colchicine and ibuprofen, prednisolone was add as the fever persisted. Further investigation revealed a high concentration of Calprotectin, suggestive of inflammatory bowel disease, though subsequent colonoscopy yielded normal results. With the resolution of symptoms, the patient was discharged in a stable condition.

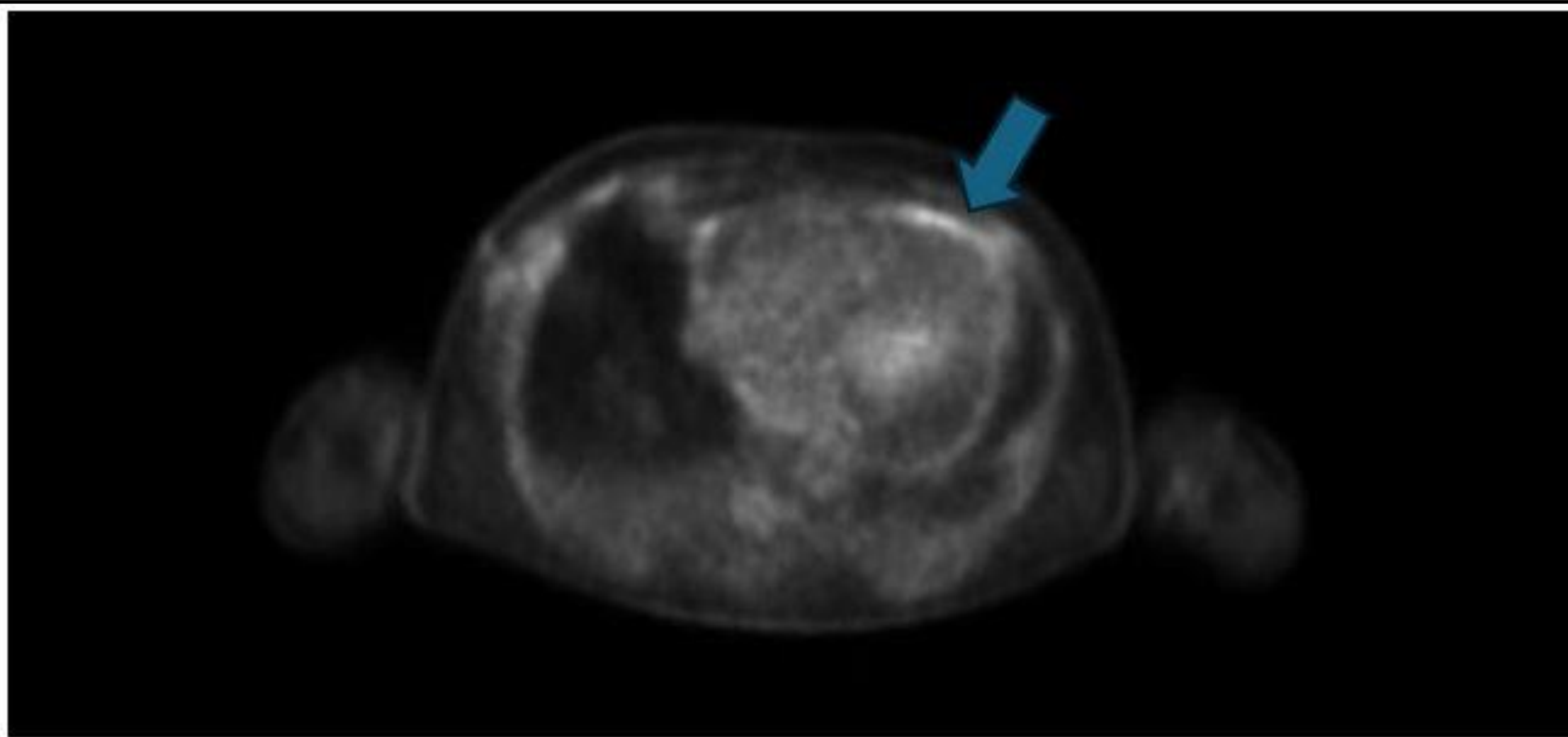


Figure (2): FDG PET CT scan, Cross sectional view, showing pericardial uptakes denote pericarditis (arrow). Pericardial fluid is seen. Right and left pleural fluid is also present.

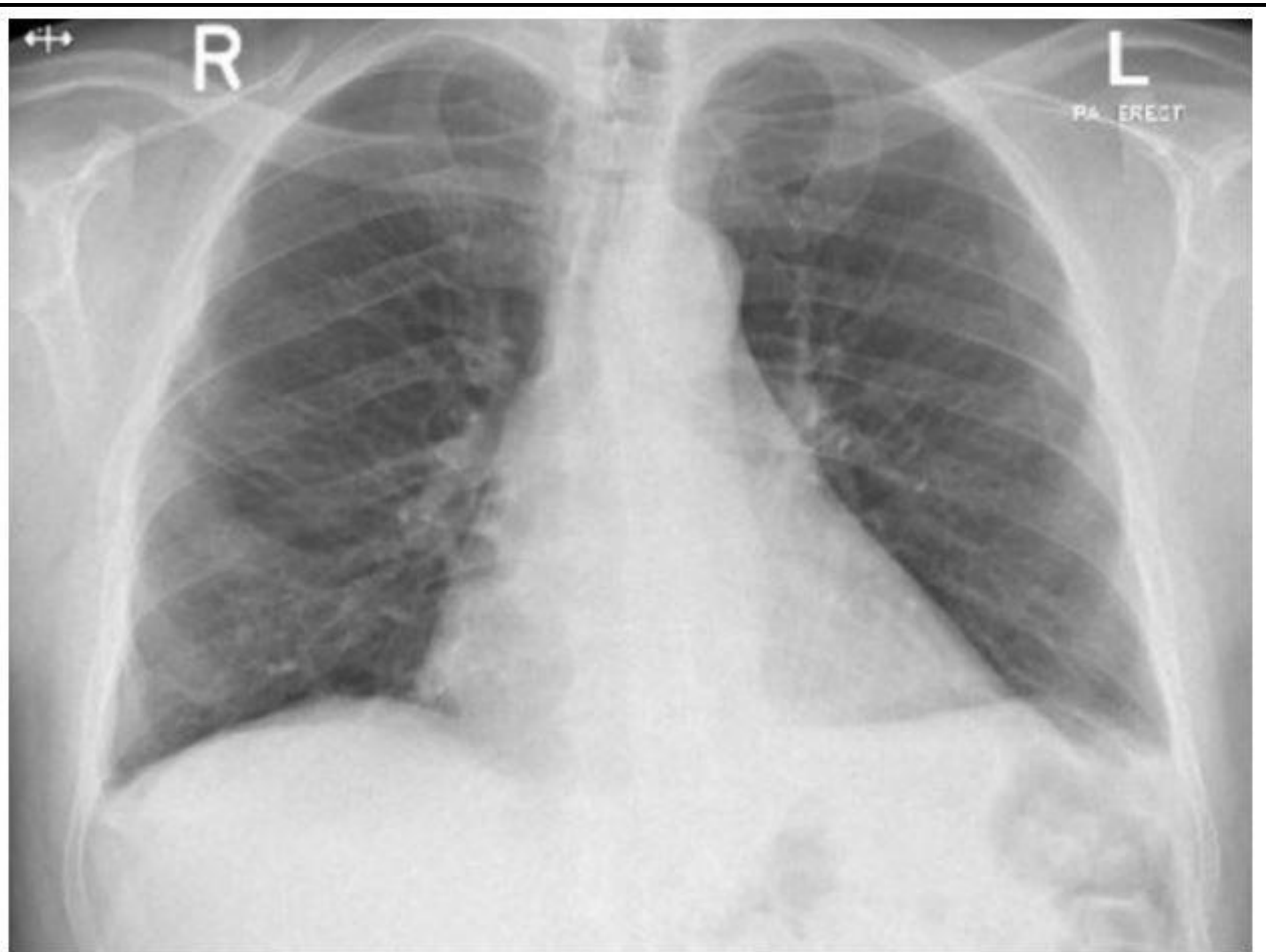


Figure (3): Chest XR was unremarkable

CONCLUSION

In summary, this case emphasizes the challenges of managing complications post-minimally invasive mitral valve repair for infective endocarditis. Despite successful surgery, the development of pericardial and pleural effusions, along with persistent fever, necessitated targeted therapy for an inflammatory aetiology. Although inflammatory bowel disease was suspected, colonoscopy yielded normal findings. This highlights the importance of comprehensive management and thorough investigation in optimizing patient care post-surgery.

REFERENCES

- Gabaldo K, Sutlić Ž, Mišković D, Knežević Praveček M, Prvulović Đ, Vujeva B, Cvitkušić Lukenda K, Hadžibegović I. Postpericardiotomy syndrome incidence, diagnostic and treatment strategies: experience AT two collaborative centers. Acta Clin Croat. 2019 Mar;58(1):57-62. doi: 10.20471/acc.2019.58.01.08. PMID: 31363326; PMCID: PMC6629199.