

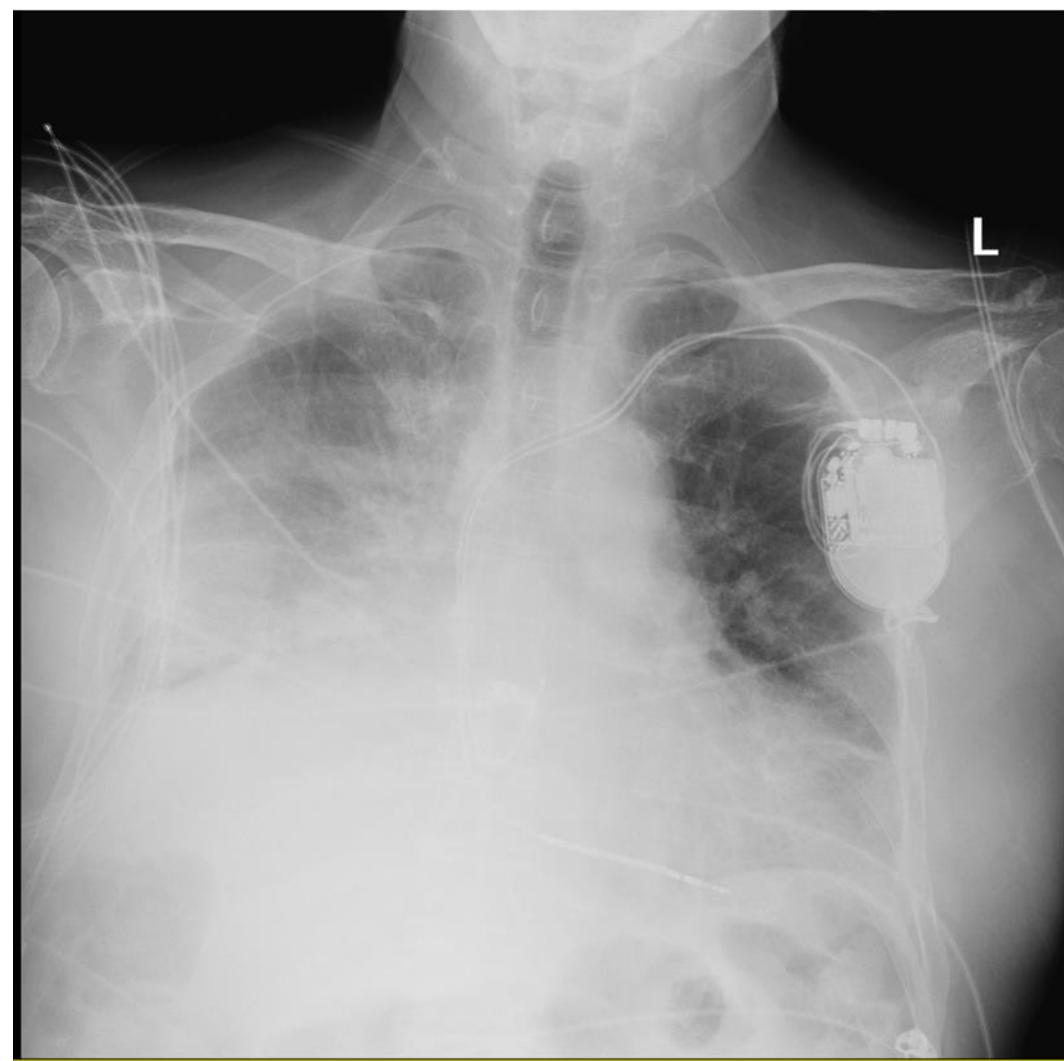
## Introduction

*Streptococcus Anginosus* is a gram-positive bacterium of the Streptococcus Viridians group, usually present as normal flora in the oral cavity and the gastrointestinal tract. It can cause pyogenic infections in multiple organs in the body especially in the immunocompromised host.

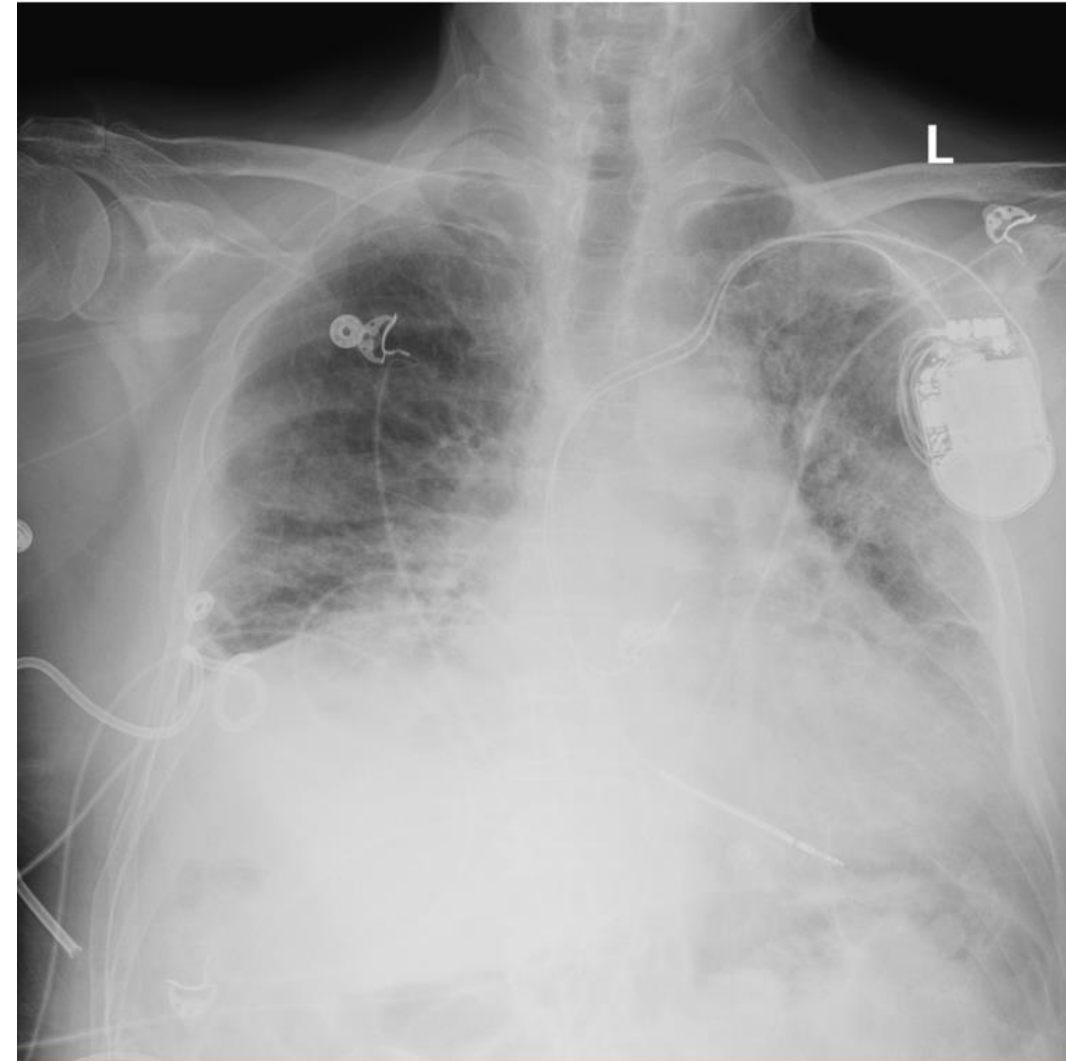
## Case Presentation

A 75-year-old male with past medical history of coronary artery disease, heart failure with reduced ejection fraction, diabetes, presented to ER with worsening lower abdominal pain associated with poor appetite and decreased oral intake for 3 weeks duration. He had cholecystectomy about a year prior to presentation. Initially his vital signs were within normal limits. Physical examination was remarkable for mild right upper quadrant abdominal tenderness without rebound. CT abdomen with intravenous (IV) contrast showed 10.7 cm low density collection with mild rim enhancement inferior to the right hepatic lobe (image-2). He was started on Vancomycin and Piperacillin/tazobactam. Next day he underwent CT-guided drainage of the infrahepatic collection with removal of 50 cc of purulent material and placement of an intraabdominal drain. A loculated right sided pleural effusion was noted during the latter procedure and 350 cc of pleural fluid was drained as well (image-1). Pleural fluid analysis showed empyema which grew streptococcus anginosus, similar to the result from the abdominal abscess fluid culture. Antibiotics were changed to ceftriaxone based on sensitivities, but patient had recurrent right sided pleural effusion for which he had placement of a chest tube. His condition improved and he was discharged to a rehabilitation facility to complete 6 weeks total of IV Ceftriaxone.

## Image 1- Chest X-Rays



CXR on admission showing right sided pleural effusion and multifocal bilateral air space disease.




CXR status post right thoracentesis.

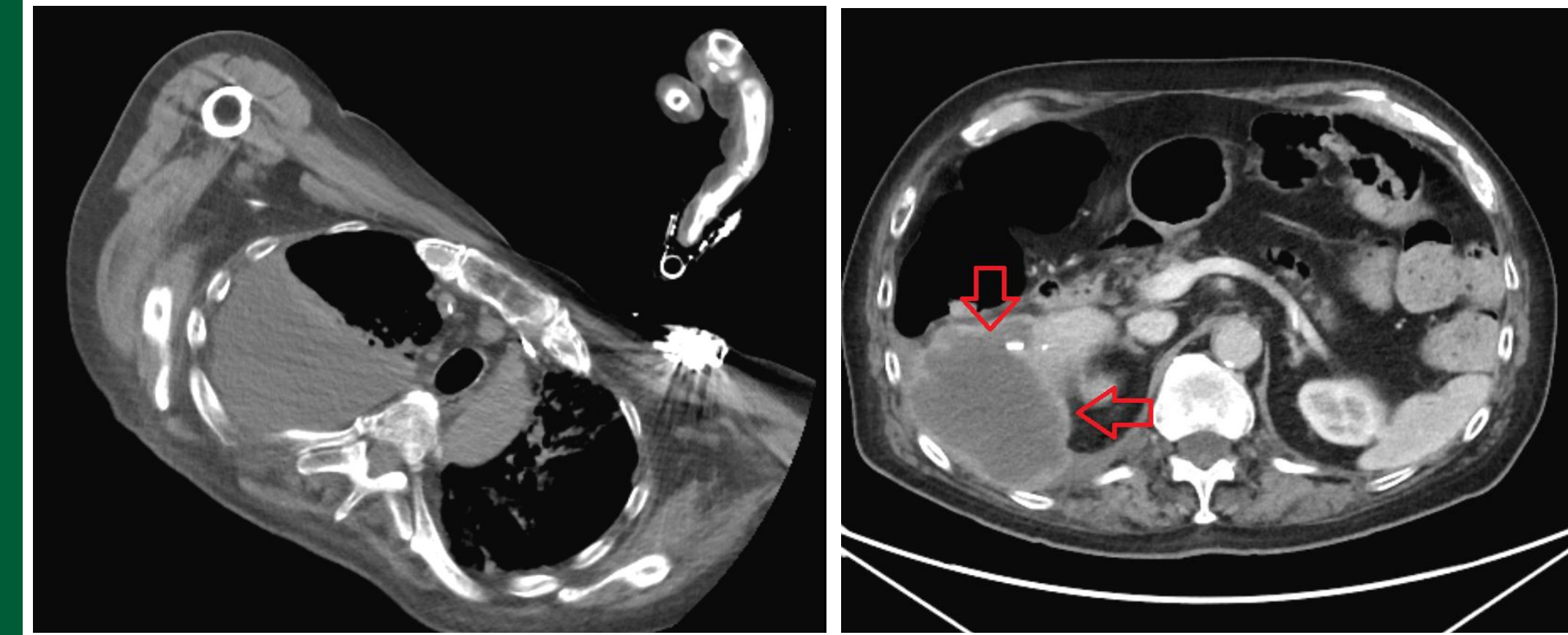


# *Streptococcus anginosus* causing simultaneous infections in an elderly male: Empyema and Infrahepatic Abscess: Case Report and Literature Review.

Hmidat, A, Altarawneh, S, Simmons, J, Mlatoum, H, &  
Zeid, F  
Department of Internal Medicine,  
Marshall University Joan C. Edwards School of  
Medicine

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## Image 2 – CT Scan



Moderate size effusion around right lung 10 \*7 cm low density collection with mild rim enhancement is noted inferior to the right hepatic lobe.

## Discussion

*S. anginosus* is a normal flora that can cause infection in any organ. Most of the patients reported to have *S. anginosus* infection were immunosuppressed by cancer, long term steroid use, diabetes or splenectomy. It is less common for this organism to cause concurrent multiple organs infections. Published cases of simultaneous *S. anginosus* infection of multiple organs were limited and usually ended in poor prognosis like death or turned out to be the same infection with an anatomic connection between the organs. Our patient had the infrahepatic collection diagnosed first before the right sided pleural empyema. When the infrahepatic collection was drained, the right-sided pleural effusion size did not change, suggesting lack of connection between both compartments. *S. anginosus* is commonly sensitive to all beta-lactam antibiotics. Thus, it is commonly treated with Ceftriaxone. Penicillin-intermediate or resistant *S. anginosus* is rare comprising <2% of infections.

## Conclusion

*S. anginosus* is a pyogenic organism that can cause infection in variant organisms more commonly in the immunocompromised host. Having recurrent infections with it could suggest resistant bacteria or underlying endocarditis. Proper antibiotics and drainage usually result in good outcome.

References are available upon request.