HEMODIALYSIS CATHETER RELATED INFECTION CAUSED BY Mycobacterium abscessus IN A YOUNG PATIENT

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Introduction

Catheter related infection is one of the most serius complications, because constitutes a cause of morbidity and mortality in hemodialysis patients, leads the cause of catheter removal. Nontuberculous mycobacteria also cause catheter related infection, but the prevalence is relatively low.

Mycobacterium abscessus is a rapidly growing, nontuberculosis mycobacterium. Mycobacterium are divide into four groups; the Runyon classification, based on the growth rate of the organism, the four group grow in less than a week and is where Mycobacterium abscessus correspond.

M. abscessus was first isolated from a knee abscess by Moore. It was named after its ability to produce deep subcutaneous abscesses. It commonly causes skin infections, soft tissue infections, and respiratory infections, but it can also cause various infections in almost all human organs.

Case report

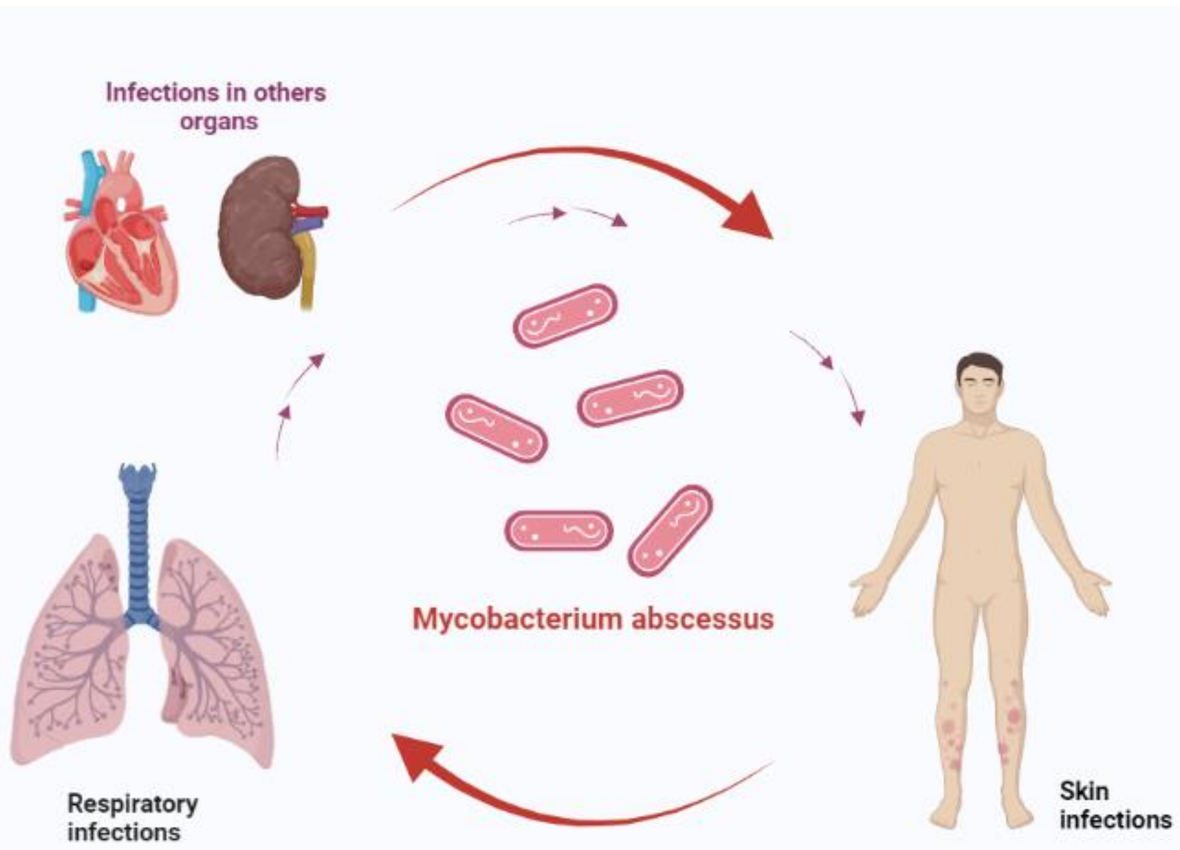
Case report of an 21 years old Mexican woman on hemodialysis for six months, carrier of a single right jugular tunneled catheter, visited the hospital because of presence of fever, dyspnea and bacteremia on hemodialysis on the last seven days. Upon arrival oxygen saturation of 88% was evidenced, procalcitonin levels was reported in 43 ng/ml and the White blood cels count was 3.74 m/Ul. A chest tomography was requested, where ground glass opacification was seen. Sampling of central and peripheral blood cultures was performed and the rapidly growing nontuberculous mycobacteria, Mycobacterium abscessus, was isolated. Hemodialysis catheter removal was immediately performed. On physicial examination there was no evidence of discharge of pus from the exit site of the catheter, skin without edema or erythema. An transesophageal echocardiogram was performed too, ruling out the endocarditis diagnosis. The patient received combination antibiotic therapy, conformed by linezolid, clarithromycin and amikacin for two weeks. Her clinical course was excellent.

Results

The most common etiologies of a hemodialysis catheter related infection are Staphylococcus and Streptococcus, both may manifest as catheter exit site or tunnel infections, bacteremia, abscess, and fever. In contrast, infections that is slow growing in a well appearing patient, and which do not respond to first line antibiotics, are much less common and should raise concern for an atypical Mycobacterium infection.

Exposure to tap water appears to be the major risk factor for health care-associated disease. Most outbreaks of health care-associated infections have been associated epidemiologically with various water sources, including water-based solutions, may also be responsible for catheter-related infections due to Mycobacterium abscessus. Mycobacteria can be associated with biofilms, they are very important in the persistence of infection.

Isolates of rapidly growing mycobacterium are not susceptible to the first-line antituberculosis drugs and require susceptibility testing in specialized mycobacterial lab.



Conclusions

Mycobacterium abscessus is a rare causative organism for hemodialysis related catheter infections and is difficult to treat. The risk of nontuberculous mycobacterial infections should be considered in patients on hemodialysis. The success and the infection resolution was related to the rapid etiological agent identification and the rapid catheter removal.

Bibliography

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