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Research Article

**HOSPITAL BUG IN A COMMUNITY SETTING: CASE REPORT
OF STENOTROPHOMONAS MALTOPHILIA ASSOCIATED
PNEUMONIA IN A COMMUNITY SETTING**¹Dr. Zahoor Ahmed, ²Dr. Mohammad Ammar Hassan, ³Dr. Ahtsham Yousaf Chaudhary,
⁴Dr. Ushbah Waqar Hashmi, ⁴Dr. Arifa Tariq, ⁴Dr Hassan Raza¹Demonstrator, Rai Medical College Sargodha²Medical Officer, BHU Jhavrian³House Officer, DHQ Hospital Sargodha⁴Demonstrator, Rai Medial College Sargodha**Abstract:**

The case report of Community-acquired pneumonia in a male patient with co-morbidities of diabetes mellitus, hypertension, and gout. Empiric antibiotic treatment did not resolve the clinical picture of a productive cough, and a chest computerized tomography and sputum culture with antibiogram were performed, identifying *S. maltophilia* infection with sensitivity to levofloxacin, ceftazidime and sulfamethoxazole/ trimethoprim.

Case Presentation: Our patient is an 80-year-old Punjabi male with the history of controlled diabetes mellitus, hypertension, and gout, who presented to his primary care physician with a chief complaint of persistent productive cough with blood-tinged sputum and unintentional weight loss for four months. He had three episodes of fever, chills and night sweats.

Conclusions: *S. maltophilia* associated pneumonia can occur in the community setting. It is multi-drug resistant and the infection must be treated as soon as possible to avoid the adverse outcomes

Key words: pneumonia, stenotrophomonas maltophilia, sputum culture, antibiogram, antibiotic therapy

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INTRODUCTION:

Stenotrophomonas (Xanthomonas) maltophilia is a multidrug resistance gram-negative bacillus that is an opportunistic pathogen. *S. maltophilia* infection has risen over the last decade as an important nosocomial pathogen in immunocompromised or severely debilitated patients. [1]. We present the very rare case of *Stenotrophomonas maltophilia* pneumonia in a community setting.

Case Presentation:

Our patient is an 80-year-old Punjabi male with the history of controlled diabetes mellitus, hypertension, and gout, who presented to his primary care physician with a chief complaint of persistent productive cough with blood-tinged sputum and unintentional weight loss for four months. He had three episodes of fever, chills and night sweats. No other family member was sick. He denies any recent travel. He has no other pertinent surgical, or family history. He was taking Amlodipine besylate 2.5 mg, furosemide 20mg, hydrochlorothiazide 25mg for hypertension, Sitagliptin 100mg for diabetes mellitus, Allopurinol 100mg for gout, Atorvastatin for hyperlipidemia. He denies the use of drugs, alcohol, or tobacco. He states he is sexually active, as he is in a monogamous relationship with his wife. On physical exam, he was afebrile and her vital signs were within normal limits. He appeared alert and oriented, and his mucous membranes were moist. His cardiovascular, pulmonary, abdominal, and genitourinary system exam findings were benign. He was initially diagnosed as a case of community-acquired pneumonia. Labs and XRAY/Computer tomography scan were ordered to evaluate the patient for pneumonia and to rule out Tuberculosis He was started on Azithromycin 500mg for community-acquired pneumonia, to which he did not respond.

The patient was asked to follow-up with his blood tests and imaging results. The blood test revealed elevation of Erythrocyte Sedimentation Rate (39.0) and C-Reactive Protein (2.7) normal leukocyte (4.8), and BSR elevation (204 mg/dl) Quantiferon-Tuberculosis test was negative. Computed tomography of the chest without contrast was performed, which showed mild left lower lobe opacities representing early atelectasis and/or mild pneumonia. No imaging specifically suggests pulmonary tuberculosis. Sputum culture was ordered, which showed *Stenotrophomonas maltophilia* sensitive to Ceftriaxone, levofloxacin, trimethoprim/Sulfamethazine. Levofloxacin 500mg for 15 days resolved the patient symptoms.

DISCUSSION:

Stenotrophomonas Maltophilia (*S. Maltophilia*) is a waterborne aerobic gram-negative multi-drug resistant organism most commonly associated with respiratory infections in humans. [2] *S. Maltophilia* can also colonize the respiratory tract and plastic surfaces like catheters due to their flagella like properties that allow them to adhere to the surfaces. Although not that common, in recent years it is emerging to become an important cause of nosocomial infections [3]. It is mostly seen in patients with immunodeficiency however a few cases have been isolated from immunocompetent individuals [4] This organism was originally known as *Pseudomonas maltophilia* but was then transferred to the genus *Xanthomonas* in 1993 and eventually became the only member of the genus *Stenotrophomonas* [4].

The well known risk factors of *S. maltophilia* infection are increased hospital stay, ICU admission, indwelling catheters, mechanical ventilation, antibiotics, corticosteroids and immunosuppressive therapy, underlying malignancies, HIV infection and organ transplant [6] When pneumonia develops in patients without significant risk factors they typically present with mild lobar pneumonia and can be treated as an outpatient. On the other hand, if any of the above risk factors are present then patients can develop a very severe disease requiring ICU admission and carries mortality as high as 50% [3]

Symptoms developed by *S maltophilia* infection are nonspecific that includes fever, cough, and dyspnea (3) Some people may present with endocarditis, mastoiditis, peritonitis, meningitis, soft tissue infections, wound infections, urinary tract infections or eye infections. *S. maltophilia* infection is usually diagnosed by examining a small sample of blood, mucus, or urine [5] TMP-SMX is the first line treatment option for *S. maltophilia* infection [2] [3] [5] A high dose that is 15mg/kg is used similar to the amount needed to treat *Pseudomonas Jiroveci* pneumonia. Recently new reports suggest resistance to TMP-SMX throughout the world ranging from 1.1% in Europe, 2.4% in North America, 4.5% in Latin America and 9.2% in Asian Pacific regions [2] *S. maltophilia* is resistant to aminoglycosides, beta-lactams, fluoroquinolones and [2] [5] Infections must be treated as quickly as possible due to the risk of increased mortality. The length of treatment depends on the site of infection, usually 14 days for bacteremia and 7 days for pneumonia [4] Due to its multidrug resistance, the combination therapy can be tried like TMP-SMX with ticarcillin-clavulanic acid. Even the expanded spectrum cephalosporin cefpirome and quinolones

like Gatifloxacin and beta-lactam/beta lactase inhibitors can be used [2] [3].

CONCLUSIONS:

S. maltophilia associated pneumonia can occur in the community setting. It is multi-drug resistant and the infection must be treated as soon as possible to avoid the adverse outcomes.

REFERENCES:

1. Denton M, Kerr K (1998). "Microbiological and: clinical aspects of infection associated with *Stenotrophomonas maltophilia*". Clin Microbiol Rev. 11. 1:57-80. 9457429.
2. *Stenotrophomonas maltophilia*: From trivial to grievous Lipika. Singhal1. Parvinder, 2:Vikas. Gautam3 Fatal hemorrhagic pneumonia: Don't forget *Stenotrophomonas maltophilia* Cristina Gutierrez, a,* Egbert Pravinkumar, a Dave Balachandran,b. and, Virginia; Schneidera.
3. Novel Nosocomial Infections by *Stenotrophomonas maltophilia*: First Reported Case from Lucknow, North India * Chiranjoy Mukhopadhyay, *.
4. Anudita Bhargava and. Archana Ayyagari, *S. maltophilia* pneumonia: A case report Mauro Gellera,b,c, *, Carlos Pereira Nunesa, c, Lisa. Oliveirab, Rafael; Nigric. A Case of *Stenotrophomonas Maltophilia* Bacteremia William Reid: M.D., and. Balbir Brar, M.D.
5. Fouhy, Yvonne, et al. "Retraction for Fouhy et al., "Diffusible Signal Factor-Dependent Cell-Cell Signaling and Virulence in the Nosocomial Pathogen *Stenotrophomonas maltophilia*." (2018): e00235-18.
6. Rizek, Camila Fonseca, et al. "Multidrug-resistant *Stenotrophomonas maltophilia*: Description of new MLST profiles and resistance and virulence genes using whole-genome sequencing." *Journal of global antimicrobial resistance* 15 (2018): 212-214.