Roseomonas Gilardii, A Pink Non-Fermenter Associated with Bacteremia: A Rare Case

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Abstract

R. gilardii is a pink gram-negative coccobacillus belonging to the genus Roseomonas. Here we are going to discuss about a case which is presented as acute febrile illness. *Roseomonas gilardii* has been isolated from the blood specimen of the patient. She has been treated with Amikacin referring to previous literature[1]. The patient started recovering and was discharged in a recovery phase.

Key words: *acute febrile illness, blood culture, immunocompromised*

Introduction

R. gilardii is a pink gram-negative coccobacillus belonging to the genus *Roseomonas.* These bacteria have been isolated from clinical specimens for the last 30 years, but prior to the current classification, the group had been referred to as Pink Coccoid groups 1 to 4[1,2,3,4]. In 1993, Rihs divided the genus into six *Roseomonas* species based on biochemical and DNA hybridization techniques[5]. Of these six, *R. gilardii*is most frequently related to human infections. These infections tend to occur in the immunocompromised and are debiliated host. Most patients completely recovered from their infections. Bacteremia is most common presentation[6]. The patient presented with fever typically in immunocompromised host. Other presentation reported as peritonitis, septic arthritis, ventriculities, catheter based infections[7].

Case Report

A 42 yr old female presented to the casualty with the history of fever associated with chills and rigors for the last 28 days. There was occasional vomiting and head reeling. She is known case of type 2 Diabetes Mellitus and Hypothyroidism. She was treated on OPD basis from another physician after which fever did not subsided. On examination vitals were stable with temperature recorded as 101 degree Fahrenheit .On systemic examination there was no significant finding .She had been admitted to the hospital with the diagnosis of acute febrile illness to evaluate. In hospital stay during the same day the temperature recorded was 102 degree Fahrenheit during which blood culture was sent and other investigation like CBC, Urine routine and microscopy, Urine culture and sensitivity, Chest x ray PA view, USG Abdomen and Pelvis was done and patient was started on Injectable Ceftriaxone with Oral Azithromycin suspecting in the line of Enteric Fever.

During the next 3 days of Hospitalization the patient was still febrile with maximum temperature recorded is 103 degree Fahrenheit. On investigation CBC there was leukocytosis with white cell count of 12000/cubic mm. Urine routine and microscopy did not reveal any abnormality. No growth was observed on urine culture. Chest x ray was normal with no significant abnormality. Blood culture report was delayed but hospital central laboratory had reported that there was a gram variable organism from culture[8]. On day 5, Lab had given a

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blood culture report which showed the organism to be *Roseomonas gliardii*. The Vitek-2 system could only identify the organism but could not provide the sensitivity pattern. We started the patient on Injectable Amikacin in place of Ceftriaxone on basis of previous literature[9].

After Amikacin the patient started recovering and has been afebrile for 3 days and the subsequent blood culture was sterile. On day 8 the patient was discharged on request and was asked for frequent check up.

Discussion

The genus *Roseomonas* comprises groups of slow-growing, Gram-negative coccobacilli, which only infrequently cause infection in humans. When identified, they are associated with immunocompromised adults, often causing bacteraemia. Due to their rarity, members of this genus can be overlooked or misidentified using automated laboratory identification systems. *Roseomonas gliardii* is resistant to Cephalosporins. So our patient did not improve during the first 3 days of hospitalisation. The *Roseomonas* is universally susceptible to Imipenem, Amikacin, Gentamycin, Tobramycin[9]. In our cases our patient responded to Amikacin and was discharged during recovery phase.

Conclusion

Roseomonas sp. can cause a variety of clinical diseases including: bacteraemia, soft-tissue infection and bone or joint infection[7,10,11]. Due to the rarity of this infectious agent, it may be overlooked from a clinical and microbiological perspective. A method to identify organisms collected from sterile sites, such as the Vitek 2 system (bioMe´rieux), might not correctly identify *Roseomonas* species and needs a careful microbiological correlation like growth after prolonged incubation in an appropriate culture environment and formation of characteristic pink, mucoid colonies. Despite the fact that this infection seems to occur in debilitated patients, mortality from it seems to be relatively low and patients do usually recover completely.

Conflict of Interest: Nil

Source of Funding: Nil

Ethical Clearance: Taken from Institutional Ethical Committee, KIMS, Bhubaneswar.

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