

Case Report

A Rare isolate of *Kocuria kristinae* in Catheterized Patient

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ABSTRACT

A 24 year old male patient came to Sree Balaji medical college and hospital, with complaints of difficulty to pass urine, abdominal pain, distension and no history of fever. He was admitted in surgical ward and to relieve from the symptoms he was catheterized along with medications. The patient felt better and was discharged after 3 days of observation with the catheter. The bacterial isolate was catalase positive, coagulase weakly positive and non motile and was resistant to ampicillin, gentamycin, ceftazidime, ceftriazone, penicillin, erythromycin and oxacillin. Our study highlight the importance of its isolation from clinical samples and the resistance pattern shown by them also makes *Kochuria* an important specimen to be identified.

INTRODUCTION

Kochuria is well known from 1947 and was first classified under *Micrococcus*, and now it has been reclassified into *Kocuria*. *Kocuria* is widespreadly found in environment, and is also found as normal skin flora in humans. There have been very few documented cases of cases where infection is caused by *Kocuria*. Few of the cases reported from patients with undwelling devices, suppressed immunity or any predisposing disorders. *Kocuria* was previously classified under *Micrococcus* and now it has been re-classified in to *Kocuria* along with *K. rosea*, *K. varians*, *K. palustris* and *K. rhizophila*. *K. kristinae* is Gram positive cocci arranged in irregular clusters and tetrads, facultative anaerobe, and non-motile.

CASE PRESENTATION

A 24 year old male patient came to Sree Balaji medical college and hospital, with complaints of difficulty to pass urine, abdominal pain, distension and no history of fever. He was admitted in surgical ward and to relieve from the symptoms he was catheterized along with medications. The patient felt better and was discharged after 3 days of observation with the catheter.

After 7 days the patient came to OPD of Department of Surgery with complaints of leakage of urine from the catheter and itching over the gland penis. No history of fever was complained, but the patient complained of mild weakness.

He was thoroughly investigated, catheter was removed urine sample was collected along with the tip of catheter and was send to Microbiology lab for gram staining, culture and routine, all other routine investigation were also send. His hemogram report was normal, urine routine showed 15-20 pus cells/high power field (hpf).

The sample was inoculated on Sheep blood agar and Mac Conkey agar and was incubated at 37 c for 24 hours. After 24 hours of incubation Sheep Blood agar showed Tiny, pale, non-haemolytic, smooth and convex colonies. Whereas no growth was observed on MacConkey's agar medium. Gram staining showed gram positive cocci which were mostly arranged in tetrads. The organism which was grown was catalase positive, coagulase weakly positive and non motile.

Antibiotic sensitivity testing was done on Muller Hilton agar according to CLSI 2016 guidelines and

the disk where dispensed using a disk dispenser. The organism was resistant to ampicillin, gentamycin, ceftazidime, ceftriazone, penicillin, erythromycin and oxacillin. The organism was processed in VITEK and was conformed as *Kochuria kristinia* (reports attached).

DISCUSSION

Organisms which were non-pathogenic and which are considered to the normal flora have gained entry to produce disease in humans because of the increased use of indwelling instruments, immunocompromised state, and irrational use of antibiotics. *Kochuria kristinae* which usually presents as normal flora of skin, oral cavity and mucus membrane, has been reported to cause severe infections in human especially in hospitalised individuals. They have been found to be responsible for causing endocarditis and central venous catheter-related bacteraemia in patients with ovarian cancer [2,3] and acute leukaemia [4] and in pregnant females [5]. Apart from bacteraemia, reports of cholecystitis in immunocompetent hosts, as well as dialysis related peritonitis [6–8] have also been documented.

In our case a 24 year old male patient could have harboured the infection either during his stay in hospital or because of the prolonged use of catheter. And the most significant point to note is its antibiotic sensitivity pattern, most of the antibiotics including penicillin, ceftriaxone, ampicillin were resistant indicating the highly resistant strain of *Kochuria*. He was started on sensitive antibiotics and was observed in ward and the patient's condition improved drastically and was discharged with some oral antibiotics and was requested to come for a follow – up after 1 week.

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CONCLUSION

Even though these organisms were considered harmless microorganism, the clinical spectrum of *Kochuria kristinia* has expanded. Due to the lack of advanced laboratory facilities in our country like VITEK, we could misdiagnose as Coagulase negative *Staphylococcus aureus*. Recent studies have highlighted the ability of *Kochuria* to cause infection in both immune-compromised and immune-competent patients highlighting the importance of its isolation from clinical samples and the resistance pattern shown by them also makes *Kochuria* an important specimen to be identified.

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