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CHOLANGITIS BY CHRYSEOBACTERIUM MENINGOSEPTICUM

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ABSTRACT: Chryseobacterium meningosepticum, a gram negative bacterium predominantly found in soil and water is a nosocomial pathogen which is responsible for causing opportunistic infection and meningitis in children in hospital has become area of concern. We have described a case report of 64 year patient with Cholangitis who acquired the bacterium nosocomially.

KEYWORDS: Chryseobacterium meningosepticum, Gram Negative rod, Cholangitis, India.

INTRODUCTION: E. meningosepticum a gram negative bacillus formerly known as Flavobacterium reclassified as Chryseobacterium meningosepticum, was identified as a causative agent of meningitis in neonates and outbreaks have occasionally been described since 1961 was identified by Dr. Elizabeth King.¹ The bacilli is non-motile, non-fermentative, catalase positive, oxidase positive and appears yellow pigmented, smooth and fairly large (1-2mm in diameter) on culture plates. Case reports have described patients with endocarditis, cellulitis, necrotizing fasciitis, hepatitis, osteomyelitis and eye infections and pneumonia.² Outbreaks usually extend over a period of a few week^{3,4} although they may last longer.⁵ Very few literatures are available infection caused by Chryseobacterium meningosepticum in Indian scenario. As far as search in Pubmed, Google scholar is concerned this is the first ever case report of Chryseobacterium meningosepticum in North India.

CASE REPORT: A 64 years old patient was admitted with complaints of yellowish discolouration of sclera and skin. The patient was having loss of appetite and itching all over the body. USG abdomen showed echogenic lesion filling the common duct and left hepatic duct with left lobe cholangio carcinoma with metastasis grade IV benign prostrate hypertrophy. MRCP showed proximal CBD intraluminal lesion in left lobe. Patient had ERCP and stenting of both duct, subsequently he developed cholangitis sepsis with increasing trend of serum bilirubin 27.7mg/dl and had to shift to ICU. Serum bilirubin started to decrease. The blood culture was sent to the laboratory for culture and sensitivity. It was positive after 24 hours of incubation and was detected by Biomerieux BacT Alert 3D 60. The pathogen was sub cultured on Blood Agar, Chocolate Agar and MacConkey Agar. There was no growth on MacConkey Agar but small translucent convex non-hemolytic yellowish orange coloured pigmented colonies were produced on blood agar. The pathogen was identified as Chryseobacterium meningosepticum on the basis of biochemical reaction tested by API ID 32 G automated identification system (Biomerieux, Marcy l'Etoile, France). These include the positive activity of oxidase, catalase, urease, indole. The organism was sensitive to Piperacillin, Piperacillin-tazobactam, Ceftazidime, Cefepime, Imipenem, Co-trimoxazole, Amikacin, Ciprofloxacin, Cefotaxime. Previous literatures also showed that the organism is sensitive to Imipenem, Cefepime, Piperacillin-tazobactam, Co-trimoxazole. The patient was given Amoxycylate, Meropenem, Aztreonam, Imipenem, and Cefepime but however the patient died. It is suggested that the patient has acquired the bacterium nosocomially.

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DISCUSSION: The organism is a biofilm forming, nosocomial pathogen is associated with invasive device such as vascular catheters and endotracheal tubes^{6,7} and has been isolated from faucets, sinks, respiratory therapy equipment, feeding bottles, venous catheter lines, nutritional solutions, contaminated syringes in an ice chest, vials, feeding tubes, flush solutions in arterial catheters, pressure transducers, and antiseptic solutions.^{8,9} Immune suppression, comorbidities, use of broad-spectrum antibiotics, and extreme age are other important risk factors for *Chryseobacterium* infections.¹⁰ The organism is predominantly found in soil and water six spp. of *Chryseobacterium* which is more commonly isolated from clinical specimen are *C.meningosepticum*, *C.odoratum*, *C.multivorum*, *C.breve* and *grp II b Chryseobacterium* spp which includes *C. indologenes* and *C.gleum*.¹¹ The genus represents only 0.27% of all processed Non fermentative gram negative bacilli and 0.03% of all bacterial isolates collected by SENTRY programme during 5 year period 1997-200.¹² The highest frequency of *Chryseobacterium* spp. Infection has been reported from Taiwan includes 91 pneumonia and 22 bacteremia patients.¹³ *C. meningosepticum* produce extended spectrum beta-lactamases, and are resistant to penicillins, cephalosporins, and monobactams. In addition, they are long known to be highly resistant to aminoglycosides, tetracyclines, chloramphenicol, erythromycin, clindamycin, and teicoplanin are the Newer quinolones and rifampin are the most active antimicrobials.^{14,15} *C.meningosepticum* followed by *C. indologenes* and *C.gleum* were the most isolated *Chryseobacterium* spp. The literature on the antimicrobial activity of *Chryseobacterium* spp. is very limited. In addition, result of susceptibility test varies when different methods are used. The bacterium *C.meningosepticum* is emerging as an important nosocomial pathogen in recent years, being multi resistant pose a serious challenge to physicians. Positive identification enables prompt treatment and increases the chance of recovery. Hence a proper Infection control practices and measures along with proper microbiology identification and testing must be done.

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