Commentary

In the present era of increasing immunosupression, the epidemiology and etiology of infectious diseases is a constantly changing fact. A number of saprophytic pathogens living harmoniously in environment are taking advantage to cause opportunistic infections. *Morganella morganii* is one such pathogen. A gram negative, facultative anaerobic bacteria, *M. morganii*, was discovered in 1906 by a British bacteriologist, H. de R. Morgan, in patients of summer infantile diarrhea.[1] Traditionally it is an environmental pathogen present in the intestinal tracts of humans, mammals, and reptiles as normal flora. However, now-a-days, it is best described as an opportunistic pathogen in nosocomial settings in patients on prolonged antibiotic therapy. Even nosocomial outbreaks have been described in the literature.[1,2] The presence of inherent drug resistance against beta lactams (one of the major and first most agents used for therapeutic purposes), is another blessing for better survival. It is a known beta-lactamase producer and so is resistant to aminopenicillins and most of first- and second-generation cephalosporins along with macrolides, glycopeptides, fosfomycin, fusidic acid, and colistin. However, it is worth noting that it responds well to third- and fourth-generation generation cephalosporins (includes ceftriaxone, routinely used in neurosurgical speciality). It is also sensitive to aztreonam, aminoglycosides, carbapenems, quinolones, trimethoprim/ sulfamethoxazole, and chloramphenicol.[3] The major risk factors predisposing to *M. morganii* infections are previous prolonged antibiotic exposure, especially to beta lactams and penicillins, diabetes mellitus, advanced age and snake bite (as it is found in the mouth of snakes).[4] It is associated with cases of Scombroid poisoning too. Seafood culture is becoming a 'fad' in the society. Some species of fin fish (rich in histidine) namely tunas, mahimahi, sardines and mackerel, if get contaminated with *M. morganii* (has enzyme histidine decarboxylase) during storage can cause anaphylactic shock like clinical syndrome on ingestion.[4]

Various species and subspecies of the organism are known which are well dealt by the authors, Patel *et al*, in their case presentation on *'Morganella morganii*, subspecies morganii, biogroup A: An unusual causative pathogen of brain abscess'.[5] The incidence of brain abscess decreased significantly in developed countries after the advent of various antibiotics and neurodiagnostic modalities. However, it is still a major health care problem in developing countries. India, as per recent study, reports an average of 9 to 15 cases per year.[6] The first case of brain abscess due to M. morganii was reported in 1995 in a neonate.[1] Review of literature shows that central nervous system infections have been reported due to *M. morganii*, but it is a rare cause of brain abscess. The possibility of isolation has been more in polymicrobial and otogenic/paranasal sinus infections. The final outcome is varied with patient fully recovering to associated morbidity or mortality.

The true identity of the causative agent if known, can well guide the treatment and management of the patient.

It is difficult for the clinicians to get a primary sample sometimes when patient has already been on treatment and for the same reason it is difficult to isolate the causative agent by microbiologist if sample quality and quantity is poor. About 9-63% of brain abscesses are reported to be culture negative due to various reasons. Therefore, high index of suspicion for this particular organism should be kept in mind whenever there is delay in response to the treatment administered. To sum up, brain abscess is a medical and surgical emergency where good correlation between the microbiologist and clinician can pay the benefits to the patient.

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