

Epidemiology, risk factors for mortality and resistance associated with *Stenotrophomonas maltophilia* bacteremia at a tertiary care hospital in Korea over 7 years

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Background: *Stenotrophomonas maltophilia* (SM) is an important emerging nosocomial pathogen. This study aimed to describe the epidemiological, clinical, and microbiological characteristics of SM bacteremia at a tertiary care hospital in Korea over 7 years.

Materials/methods: A retrospective study was conducted at a 1150-bed tertiary care hospital in Busan, South Korea. Data were collected between January, 2013 and November, 2019.

Results: A total of 79 bacteremia patients (median age: 61 years; 62% males) were reviewed; 38 (48.1%) were in 2013-2016 and 41 (51.9%) were in 2017-2019. The overall SM bacteremia-related 30-days mortality was 31.6%. Susceptibility to levofloxacin, sulfamethoxazole-trimethoprim (SMX/TMP) and minocycline were 87.3%, 92.4% and 100%, respectively. The most common clinical syndrome was central line-associated bloodstream infection (n=37, 46.8%). The others were intra-abdominal infection (n=18, 22.8%), skin and soft tissue infection (n=5, 6.3%) and pneumonia (n=5, 6.3%). In 50.6%, SM was the only pathogen of bacteremia, whereas in 49.4%, more than one causative organisms were isolated. *Acinetobacter baumannii* (in 8 cases) was the most frequent co-isolated pathogen, followed by *Enterococcus faecium* (in 6 cases), *Pseudomonas aeruginosa* (in 5 cases), *Staphylococcus epidermidis* (in 5 cases), *Enterococcus gallinarum* (in 3 cases) and *Klebsiella pneumoniae* (in 3 cases). Age (OR, 6.60; 95% CI, 1.59-27.41; $P = 0.009$), inappropriate antimicrobial treatment (OR, 3.47; 95% CI, 1.14-10.56; $P = 0.029$), and levofloxacin-resistant strains (OR, 7.86; 95% CI, 1.20-51.41; $P = 0.031$) were independent risk factors for SM bacteremia-related 30-days mortality in multivariate analysis.

Conclusions: SM bacteremia has a high early mortality rate. In our study, old age, inappropriate antimicrobial treatment and levofloxacin-resistant strains were significant independent risk factors for early mortality in SM bacteremia patients. Early diagnosis and immediate use of appropriate antibiotics are recommended to improve mortality of SM bacteremia.