

Staphylococcus aureus and Pseudomonas aeruginosa in Tubotympanic Chronic Suppurative Otitis Media Patients in Purwokerto, Indonesia

Title	Staphylococcus aureus and Pseudomonas aeruginosa in Tubotympanic Chronic Suppurative Otitis Media Patients in Purwokerto, Indonesia
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Abstract	<p>BACKGROUND: Chronic Suppurative Otitis Media (CSOM) causes hearing impairment and frequently occurred in low-income country where medical care and personal hygiene are poor. Staphylococcus aureus and Pseudomonas aeruginosa are the most common cause of CSOM. We investigated prevalence and antimicrobial susceptibility of S. aureus and P. aeruginosa from tubotympanic CSOM patients in tertiary hospital, Purwokerto, Indonesia in 2016-2017. METHODS: Ear swab specimens were collected from patients with tubotympanic CSOM. S. aureus and P. aeruginosa were isolated and identified by culture, matrix-assisted laser desorption ionization-time of flight mass spectrometry (MALDI-TOF MS), and molecular tools. Antimicrobial susceptibility testing was performed using the disk diffusion method. RESULTS: Out of ear swabs from 34 patients with tubotympanic CSOM, P. aeruginosa and S. aureus were identified in 35% patients. No Methicillin-resistant S. aureus (MRSA) strain was found from the ear swabs of the patients with tubotympanic CSOM. Bacterial identification using the MALDI-TOF MS was concordantly with culture and molecular tools. All S. aureus isolates showed full susceptibility to ceftazidime and trimethoprim-sulphamethoxazole. Resistance to tetracycline was common with only 64% of S. aureus strains being susceptible. Meanwhile, all P. aeruginosa strains were susceptible to cefepime, ceftazidime, meropenem, gentamicin, and tobramycin. CONCLUSION: S. aureus and P. aeruginosa are found in patients with tubotympanic CSOM and still susceptible to different antibiotic agents. MALDI-TOF MS demonstrate rapid, accurate and robust to detect S. aureus and P. aeruginosa. KEYWORDS: Staphylococcus aureus, Pseudomonas aeruginosa, chronic tubotympanic suppurative otitis media</p>
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