

中文題目: Fluoroquinolone 使用會增加 trimethoprim-sulfamethoxazole 抗藥 *Stenotrophomonas maltophilia* 的風險--配對的病例對照研究

英文題目: Fluoroquinolone use increased risk for trimethoprim-sulfamethoxazole resistant in hospitalized patients: A matched case-control study

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Background: Emergence of trimethoprim-sulfamethoxazole resistant *Stenotrophomonas maltophilia* (TSRSM) in the world is a serious threat to patients. The aim of current study is to identify risk factors associated with TSRSM isolation in hospitalized patients.

Methods: We conducted a matched case-control study in Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan. The controls were selected from patients with trimethoprim-sulfamethoxazole susceptible *S. maltophilia* (TSSSM) after matching with the case group for age (within 5 years), sex, admission ward and site of isolation at a ratio of 1:1.

Results: Two hundred and sixty eight patients were included in our study (134 cases and 134 controls). *S. maltophilia* was isolated predominantly from respiratory tract followed by blood. Bivariable analysis showed that previous exposure to fluoroquinolones ($P < 0.001$), length of intensive unit stay ($p = 0.002$), and length of hospital stay ($P = 0.004$) before *S. maltophilia* isolation were associated with TSRSM occurrence. The multivariable analysis showed that previous exposure to fluoroquinolones [odds ratio (OR) 6.741, 95% confidence intervals (CIs) 2.858–15.900, $p < 0.001$] was an independent risk factor for TSRSM occurrence. The rate of resistance to levofloxacin was higher in patients with TSRSM than control group with significance (57.5% vs. 6.0%, $p < 0.001$).

Conclusion: According to our study, fluoroquinolones use was an independent risk factor for TSRSM occurrence. TSRSM had increased risk for resistance to levofloxacin simultaneously.

Keywords: Trimethoprim-sulfamethoxazole, levofloxacin, resistance, *stenotrophomonas maltophilia*