

中文題目：末期腎病患者接受Linezolid治療極易併發貧血及血小板低下症

英文題目：**High Frequency of Linezolid-Associated Thrombocytopenia and Anemia among Patients with End-Stage Renal Disease**

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**Background.** Linezolid is a new antimicrobial agent with a broad spectrum of activity against virtually all clinically important gram-positive bacteria. Its favorable pharmacokinetic and pharmacodynamic profiles make it an attractive candidate for the treatment of Gram-positive infections in patients with renal failure. However, data regarding the efficacy and tolerability of linezolid in patients with end-stage renal disease (ESRD) are lacking.

**Methods.** This retrospective case-control study compared the tolerability and efficacy of linezolid

between patients with ESRD or non-ESRD (NESRD), who had Gram-positive infections. Data was collected from medical charts of patients treated with linezolid for more than 7 days.

**Results.** There were 58 men and 33 women with mean age of 61.5 years (range from 45.4 to 81.2 years). Among these patients, 28 (30.8%) were receiving hemodialysis at the start of linezolid treatment. The ESRD group had a higher percentage of patients with diabetes mellitus (57.1% vs. 33.3%,  $P=0.029$ ) and older age ( $72.1\pm 10.8$  year vs.  $56.8\pm 20.4$  year,  $P < 0.001$ ) than the NESRD group. Severe thrombocytopenia ( $< 100 \times 10^9/L$ ) and anemia were significantly more frequent in the ESRD group (78.6% vs. 42.9%,  $P=0.003$ ; 71.4% vs. 36.5 %,  $P=0.003$ , respectively). The independent risk factors for thrombocytopenia identified by logistic regression analysis were pretreatment disease severity score (odds ratio [OR], 1.34, 95%; confidence interval [CI], 1.13-1.60;  $P=0.001$ ), central catheter related infection OR= 4.96, 95% CI 1.08-22.73;  $P=0.046$ ), and ESRD (OR= 6.14, 95% CI 1.63-23.26;  $P=0.007$ ). ESRD was the only independent risk factor for anemia (OR= 4, 95% CI 1.50-10.64,  $P=0.006$ ). Survival analysis for the development of thrombocytopenia or death showed significant differences between patients with ESRD or NESRD (log rank  $P < 0.001$ ).

**Conclusions.** The lower tolerability of linezolid in ESRD than in NESRD patients is evidenced by the higher rates of thrombocytopenia and anemia. The severity of these conditions necessitates treatment discontinuation more often in ESRD patients.

**Keywords:** Linezolid, end-stage renal disease, hemodialysis, thrombocytopenia, anemia