■ **Sat-406** ■

Effect of regular serum lactate monitoring in patients using linezolid

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Background/Aims: Lactic acidosis is one of the most fatal adverse effects of linezolid (LZD), an antibiotic that is used to treat serious infections caused by antibiotic-resistant bacteria. However, the measures to prevent lactic acidosis have not been well established. Thus, we conducted a retrospective study to analyze the impact of conducting regular serum lactate monitoring in patients using LZD. **Methods:** Since September 2011, we recommended regular inpatient monitoring of the serum lactate levels in the patients using LZD at our hospital. The patients were divided into two groups assigned to the non-recommendation (January 2004 – September 2011) and recommendation (October 2011 – July 2019) periods. The frequency of serum lactate monitoring, LZD-induced lactatemia, lactic acidosis, death, and rescue from critical illness was compared between the two groups. **Results:** After September 2011, compliance with the recommendation for regular monitoring of serum lactate increased from 7% to 52.7%. No difference was observed for the LZD-induced lactatemia, lactic acidosis, and death between the two groups. However, there was a significant difference in patient rescue from LZD-induced critical illness between the groups from the non-recommendation and recommendation periods (0 vs. 9, p=0.029). Moreover, LZD-induced deaths decreased from 2/137 to 0/242 (P =0.125). **Conclusions:** In patients with LZD, regular monitoring of serum lactate led to the early detection of lactatemia, thus, enabling rapid rescue. We recommend the regular monitoring of serum lactate in all patients using LZD.

Table 1. Comparison between the non-recommendation and recommendation period group

Variables	Pre-recommendation	Recommendation	P value
Total number	137	242	
Compliance with the monitoring	6/97 (6.2%)	86/163 (52.8%)	<0.001*
LZD related event			
Lactatemia	2	9	0.341
Lactic acidosis	2	1	0.288
Death	2	0	0.125
Rescue from critical illness	0	9	0.029*