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Non-activated protein C in treatment of neonatal sepsis

Background: Previously, we found that plasma protein C activity $\leq 10\%$ significantly increased the probability of the occurrence of death during neonatal sepsis. Thus, if the activity of plasma protein C declined during the course of sepsis to $\leq 10\%$, we administered a non-activated protein C zymogen to increase a protein C activity. The aim of that retrospective analysis was to explore treatment effects of protein C zymogen (PC) supplementation in septic infants, with plasma protein C activity $\leq 10\%$.

Methods: A database was used to locate 85 newborns treated with PC from among 458 analyzed infants with confirmed sepsis.

Results: The median birth weight and gestational age of treated infants were, respectively 1010.0 g and 29 weeks. In 47 infants, early-onset sepsis (EOS) developed whereas in 38 neonates late-onset sepsis (LOS) was recognized. PC was given as a single dose of 200 IU/kg. Among 458 septic patients, death occurred in 19 newborns (4.2%), exclusively in infants with plasma protein C activity $\leq 10\%$. In 15 infants, death occurred in the course of EOS and 4 newborns died of LOS (EOS versus LOS; $p=0.036$; Chi-square with the Yates correction).

Conclusions: An increased risk of death in septic neonates with plasma protein C activity $\leq 10\%$ suggests the necessity for its evaluation and possibility of supplementation of protein C zymogen.

Biography

Ryszard Lauterbach has completed his PhD and Postdoctoral studies from Jagiellonian University Medical College in Kraków. He is the Head of Department of Neonatology, Jagiellonian University Medical College and Vice-President of Polish Neonatal Society. He has published more than 75 papers in reputed journals and has been serving as an Editorial Board Member of repute.

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