Editorial

Title: Central line-associated bloodstream infections in neonatal intensive care unit

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Running title
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Over the past several decades, Korea has achieved a remarkable progress in medical field. Korean health system provides the structure for access to well-developed health care. In the midst of this rapid expansion of technology and knowledge in quantity, there is a growing awareness of the importance of quality of care.

Quality improvement in health care is important in all aspects of clinical practice. When this is applied to critically-ill patients treated in intensive care units, it is much more important because it has a significant impact on patient mortality and long-term prognosis. In this context, quality improvement of neonatal care in neonatal intensive care unit is one of the most important goals we have to achieve.

World Health Organization defines quality of care as the extent to which health care services provided to individuals and patient populations improve desired health outcomes. The main elements are safety, effectiveness, timeliness, efficiency, equitability and people-centeredness. 1) Among these elements, patient safety is a global major concern. It is a problem not only in developing countries but also in developed and high-income countries. 2) Preventing healthcare-associated infections is a core element in improving patient safety.

Healthcare-associated infections include central-line associated bloodstream infection (CLABSI), ventilator-associated pneumonia (VAP), catheter-associated urinary tract infection (CAUTI), and surgical site infection (SSI). 3) In order to reduce healthcare-associated infections and improve patient safety, healthcare center implements bundles of evidence-based care and checklists. Korean National Healthcare-associated Infections Surveillance System (KONIS) monitors healthcare-associated infection rates as in other countries. 4, 5)

Central-line associated bloodstream infections are one of the most common healthcare-associated infections in neonatal intensive care unit. 6) However, the definition of central-line associated bloodstream infections in newborn is different from that of any other age group. 7)
In addition to the issue on definitions, there are special considerations that healthcare center should pay attention to when they set up preventive strategies.

In the issue of the Korean Journal of Pediatrics, the article titled by central line-associated bloodstream infections in neonates\(^7\) provides the definition, etiology, pathogenesis of bloodstream infections and strategies for preventing them. Authors defined two different types of bloodstream infections that were associated with central venous catheters: catheter-related bloodstream infection (CRBSI) and central line-associated bloodstream infection (CLABSI). However, the definition specifically adapted for neonates is still needed, requiring further research. Regarding prevention strategies, patient-to-staff ratios should be guaranteed, which is a part of government's continued attention and support. Medical personnel should be educated and trained.

In conclusion, Prevention and management of central line-associated bloodstream infections in the neonatal intensive care unit is very important. Medical personnel should understand precisely the pathogenesis of central line-associated bloodstream infections, be educated and trained on various preventive strategies, and the government should expand its support.

**Conflicts of interest**

No potential conflict of interest relevant to this article was reported.
References


