Ethanol lock therapy (ELT) has been performed for the purpose of preserving central venous catheter (CVC) against central venous catheter-related blood stream infection (CRBSI), but evidence is not established. We conduct a multicenter prospective study on the ELT protocol to clarify the safety and effectiveness against CRBSI” Chiba et al (2019).

Abstract:

BACKGROUND: Ethanol lock therapy (ELT) has been performed for the purpose of preserving central venous catheter (CVC) against central venous catheter-related blood stream infection (CRBSI), but evidence is not established. We conduct a multicenter prospective study on the ELT protocol to clarify the safety and effectiveness against CRBSI.

METHODS: The subjects were cases for developing CRBSI aged over 1 year who had long-term indwelling silicone CVC. After culturing the catheterized blood, 70% ethanol lock for 2 to 4 hours was done daily for 7 days. Effective rate of ELT for single and multiple times, presence or absence of relapse of CRBSI within 4 weeks and whether catheter could be salvaged for 4 weeks were examined.

RESULTS: From September 2014 to August 2018, 49 episodes enrolled from 6 hospitals. Catheter blockage was seen in 1 case and CVC was removed. In the single ELT, it was
effective in 42/48 episodes (88%). In the remaining 3 episodes that were failed from the single ELT, the second ELT was performed; however, all were ineffective. In 40/42 episodes (93%), no CRBSI relapse was seen within 4 weeks after the end of treatment. In 41/49 episodes (84%), the catheter could be preserved for 4 weeks or more after the end of treatment. Flushing of the face was seen in 2 episodes as an adverse event; however, these were transient and soon disappeared.

CONCLUSIONS: ELT is effective for 88% of CRBSI and 84% of catheters can be salvaged; therefore, this protocol is considered useful.

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