

Ethanol Lock Therapy for Healthcare Providers

BACKGROUND:

Ethanol lock therapy has been used for the management of some catheter-related infections,¹⁻³ and prevention of recurrent infections. These should be considered in patients with a central line-associated bloodstream infection (CLABSI) or catheter-related bloodstream infection (CRBSI) in whom the catheter is to be maintained. The best option is to remove the catheter and place a new one, but there are patients in whom vascular access locations may be limited. *Staphylococcus aureus* and Candida or yeast infections should be treated with removal of the catheter and NOT with ethanol lock therapy.

Polyurethane catheters have been reported to break or crack when exposed to ethanol.⁴ Ethanol lock therapy is not appropriate for patients with polyurethane catheters.

Ethanol lock therapy may also cause significant side effects in patients who have received metronidazole within 2 days or disulfiram within 7 days. Ethanol lock therapy should not be prescribed to patients on these medications.

Exclusion criteria:

- Exit site infection
- Tunnel infection
- *Staphylococcus aureus* infections
- Candida or yeast infection
- Cannot withdraw lock solution from catheter
- Disulfiram or metronidazole use
- Polyurethane catheter
- Religious or cultural objections to ethanol, or intolerance to ethanol

Procedure:

Do not inject the ethanol! Always withdraw the ethanol lock solution first! Do not use the catheter for other infusions without withdrawing the ethanol lock solution first! ! If you cannot withdraw the ethanol lock solution, the patient should call the nurse.

Dwell times range from 4-24 hours. The volume of the ethanol lock solution is 3ml in each lumen of the catheter. The concentration of the ethanol lock solution is 70%. Do not use heparin with ethanol.⁵

Perform the following in each lumen of the catheter.

Steps:⁵

1. Withdraw the ethanol lock solution and discard.
2. Use the SAS protocol. Flush the catheter with normal saline.
3. Infuse the medication through the catheter, if you are using the catheter for medication.
4. Flush the catheter with normal saline.
5. Instill 3ml of the ethanol lock solution into the catheter. Do not flush it. Keep it there until you next use the catheter.
6. Repeat on the other lumen.



References

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