

Guidelines for Laboratory Testing of Ethylene Glycol and Methanol

Proven Ethylene glycol (EG) ingestion (Refer to Appendix 1).

The following protocol assumes that one initial EG level has been performed.

No hemodialysis:

- Less than 3 mmol/L = no further analysis necessary.
- Greater than 3 mmol/L, treated with fomepizole or intravenous ethanol = repeat EG Q12h until level < 3 mmol, then no further EG levels necessary

With hemodialysis:

- One level 2 h before the end of dialysis cycle (duration of run to be determined by nephrologist).
- Once level < 3 mmol/L = no further EG levels necessary.

Proven Methanol (MeOH) Ingestion (Refer to Appendix 1)

The following protocol assumes that one initial MeOH level has been performed.

No hemodialysis:

- Less than 6 mmol/L = no further analysis necessary
- Greater than 6 mmol/L, treated with fomepizole or intravenous ethanol = repeat MeOH Q12h until level < 6 mmol/L, then no further MeOH levels necessary.
- Consider one level after treatment stopped to ensure no rebound effect/ongoing absorption

With hemodialysis:

- One level 2 h before the end of dialysis cycle (duration of run to be determined by nephrologist).
- Consider one level after treatment stopped to ensure no rebound effect/ongoing absorption.
- Once level < 6 mmol/L, no further MeOH levels necessary.

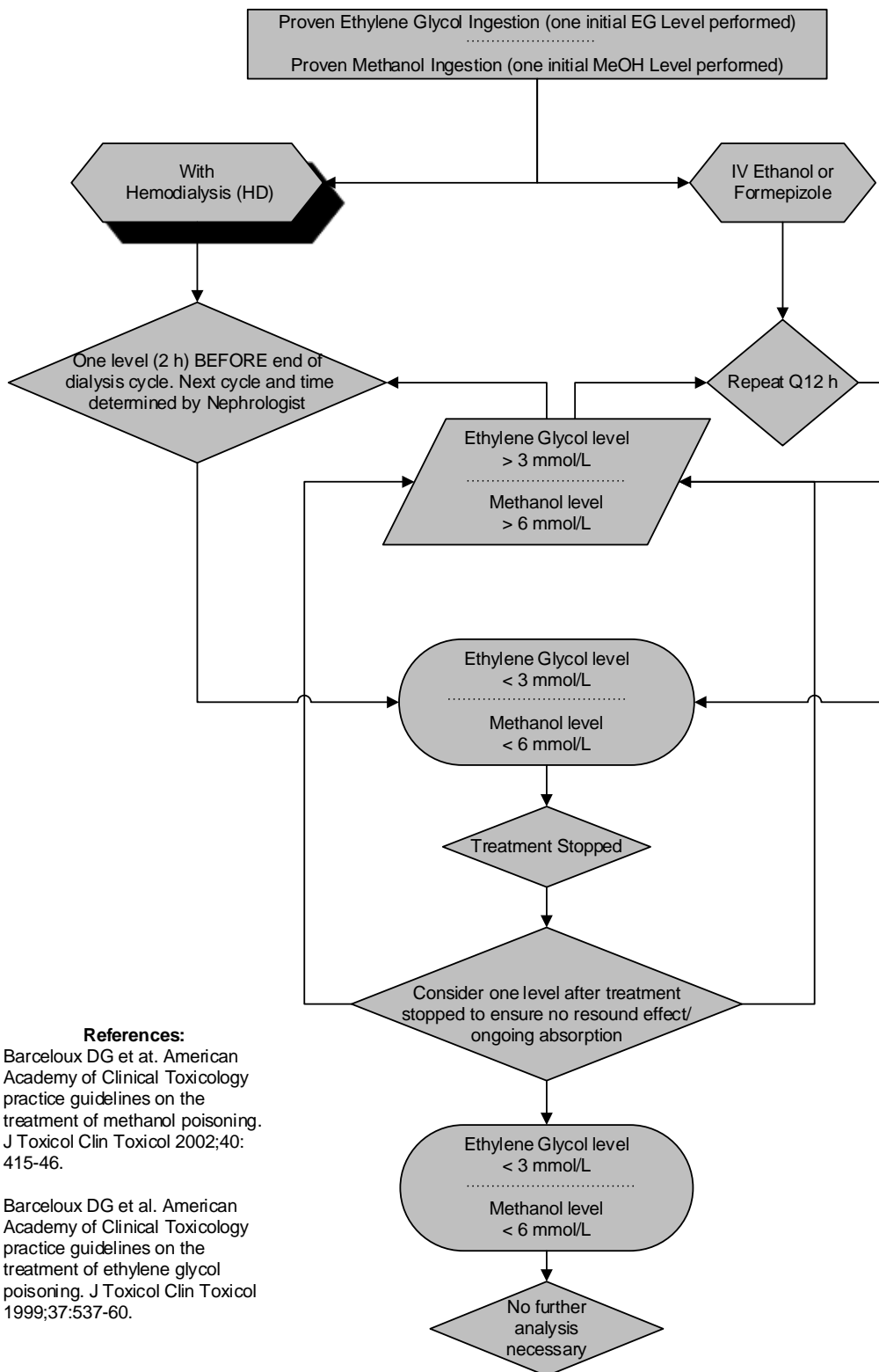
Notes

Requests for levels that not fall within these guidelines are to be discussed between the FMC Clinical Biochemist (403-944-3993) or General Pathologist On-Call (403-860-1802) and the ordering physician. Laboratory is responsible for contacting the ordering physician.

References

1. Barceloux DG et al. American Academy of Clinical Toxicology practice guidelines on the treatment of methanol poisoning. *J Toxicol Clin Toxicol* 2002;40: 415-46.
2. Barceloux DG et al. American Academy of Clinical Toxicology practice guidelines on the treatment of ethylene glycol poisoning. *J Toxicol Clin Toxicol* 1999;37:537-60
3. Brent J. Fomepizole for methanol and ethylene glycol poisoning. *N Engl J Med* 2009;360:2216-2223
4. Brent J et al. Fomepizole for the treatment of ethylene glycol poisoning, *N Engl J Med* 1999;340:832-8.
5. Brent J et al. Fomepizole for the treatment of methanol poisoning. *N Engl J Med* 2001;344:424-9.
6. Elwell R et al. Delayed absorption and postdialysis rebound in a case of acute methanol poisoning. *Am J Emerg Med* 2004;22:126-7.

Appendix 1 Guidelines for Laboratory Testing of Ethylene Glycol and Methanol



References:

Barceloux DG et al. American Academy of Clinical Toxicology practice guidelines on the treatment of methanol poisoning. J Toxicol Clin Toxicol 2002;40: 415-46.

Barceloux DG et al. American Academy of Clinical Toxicology practice guidelines on the treatment of ethylene glycol poisoning. J Toxicol Clin Toxicol 1999;37:537-60.

Requests for levels that do not fall within these guidelines are to be discussed between the medical biochemist or general pathologist – on call and the ordering physician