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/L, then no further EG levels necessary

With hemodialysis:
• One level 2h 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 2h 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 clinical biochemist (403-770-3549) or general pathologist on call (403-860-1802) and the ordering physician. Laboratory is responsible for contacting the ordering physician.

References

Appendix 1 Guidelines for Laboratory Testing of Ethylene Glycol and Methanol

Proven Ethylene Glycol Ingestion (one initial EG Level performed)
Proven Methanol Ingestion (one initial MeOH Level performed)

With Hemodialysis (HD)

IV Ethanol or Formepizole

One level (2 h) BEFORE end of dialysis cycle. Next cycle and time determined by Nephrologist

Repeat Q12 h

Ethylene Glycol level > 3 mmol/L
Methanol level > 6 mmol/L

Ethylene Glycol level < 3 mmol/L
Methanol level < mmol/L

Treatment Stopped

Consider one level after treatment stopped to ensure no resound effect/ongoing absorption

Ethylene Glycol level < 3 mmol/L
Methanol level < 6 mmol/L

No further analysis necessary

References:

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.