

Supplementary material for Zakharov S, et al. Fomepizole versus ethanol in the treatment of acute methanol poisoning: Comparison of clinical effectiveness in a mass poisoning outbreak, *Clinical Toxicology*, 2015; doi: 10.3109/15563650.2015.1059946.

Supplementary Appendix 1. Demographics and laboratory data on admission in 25 patients treated with Fomepizole vs. 25 patients treated with Ethanol – the quasi-control group.

No.	Age	G	Time to treatment (h)	Dose ingested mL	Coing. EtOH	MeEtOH mmol/L	EtOH mmol/L	Formate mmol/L	Lactate mmol/l	pH	pCO ₂ kPa	HCO ₃ ⁻ mmol/l	BD mmol/l	AG mmol/l	Glucose mmol/L	Creatinine μmol/L
1.	37	M	48-72	ND	Yes	12.5	0.0	14.4	1.1	7.25	ND	13.8	-13.9	24	6.1	109
1'.	37	M	48	500	Yes	14.9	0.0	10.6	1.8	7.25	3.6	11.9	-14.0	22	7.3	96
2.	30	M	48-72	1000	No	86.7	0.0	19.9	11.4	6.71	ND	4.3	-38.1	55	18.4	175
2'.	38	M	48-72	ND	No	148.9	0.0	25.2	8.1	6.79	ND	4.4	-34.5	47	8.0	143
3.	38	M	48-72	100	No	43.1	0.0	ND	8.2	6.69	3.2	2.7	-29.1	33	19.8	154
3'.	41	M	56	ND	ND	218.5	0.0	ND	5.9	6.77	4.4	4.8	-30.0	40	9.6	120
4.	46	M	24	350	Yes	93.6	10.9	1.5	10.9	7.37	4.9	20.9	-3.5	24	6	84
4'.	48	M	48	200	Yes	82.4	28.4	ND	1.1	7.44	4.1	23.7	-0.6	11	6.3	74
5.	66	F	11	100	No	22.5	1.7	16.6	ND	7.06	1.5	3.2	-24.7	36	5.9	58
5'.	62	F	14	300	No	54.9	11.1	17.0	0.9	7.08	2.7	5.7	-23.8	18	5.6	79
6.	46	M	18	600	No	108.6	5.0*	ND	7.8	6.86	2.6	3.5	-30.0	28	12.7	87
6'.	48	M	12	360	No	62.1	0.0	19.6	7.6	6.82	2.8	3.2	-27.5	36	13.0	167
7.	60	M	60	ND	No	22.5	0.0	12.5	3.5	7.02	1.3	2.5	-26.4	32	11.9	127
7'.	65	M	48	280	No	24.0	2.2	21.2	7.3	7.00	5.2	10.2	-19.1	17	19.7	154
8.	40	M	30	700	No	49.3	0.0	ND	3.0	7.05	1.0	2	-26.2	36	9.3	115
8'.	42	M	32	500	Yes	14.0	0.0	0.9	1.9	7.09	2.0	4.6	-25.2	32	6.8	102
9.	54	M	36	500	No	47.8	25.6	ND	ND	7.39	3.9	17.2	-6.3	20	6.6	101
9'.	53	M	ND	500	No	34.3	96.8	ND	1.7	7.32	5.1	19.8	-5.3	25	8.3	45
10.	58	F	48	100	No	105.4	5.2*	17.8	2.1	7.11	3.4	7.8	-21.0	24	7.0	71
10'.	52	F	48	400	Yes	109.2	3.0	ND	1.1	7.09	1.8	4.0	-25.6	32	5.5	53
11.	73	M	24	400	ND	30.9	17.4*	13.5	1.7	7.16	4.0	11.4	-17.0	29	7.7	81
11'.	67	M	48	ND	Yes	53.1	17.4	ND	6.2	7.16	5.9	11.6	-12.8	41	7.8	70
12.	60	M	48	ND	ND	75.5	0.0	12.2	9.3	6.65	7.8	6.3	-31.9	33	11.2	188
12'.	58	M	ND	ND	ND	60.9	0.0	14.3	12.8	6.67	3.8	3.8	-27.5	33	16.9	81
13.	43	F	ND	13.	ND	56.2	0.0	16.4	8.0	6.93	4.9	7.6	-26.9	ND	15.8	105
13'.	46	F	24	300	No	54.6	0.0	ND	9.5	6.69	9.5	8.6	-30.0	34	16.1	111
14.	67	M	52	250	No	13.1	3.0	4.9	3.7	7.18	3.0	10.8	-18.1	ND	5.7	120
14'.	66	M	41	500	No	6.2	ND	ND	0.5	7.17	1.9	5.1	-20.7	31	8.8	110
15.	50	M	26	750	Yes	27.2	11.7*	8.9	2.6	7.34**	4.7	18.7**	-6.1	20	5.5	84
15'.	42	M	31	500	No	12.5	0.0	7.0	1.5	7.29	5.0	17.8	-7.5	18	6.4	73
16.	48	F	ND	ND	ND	56.5	0.0	9.6	9.5	6.65	3.2	3.6	-35.7	43	15.0	102
16'.	57	F	24	ND	ND	32.6	0.0	ND	15.6	6.63	4.6	3.4	-36.0	38	2.9	78
17.	61	M	48	250	Yes	21.8	0.0	1.0	ND	7.37	4.2	18	-6.0	18	6.1	85
17'.	66	M	48	200	Yes	30.6	0.0	ND	2.5	7.24	2.4	7.6	-17.2	32	11.5	95
18.	36	M	24	1200	No	51.8	0.0	3.8	4.0	6.98	1.5	3.4	-27.2	40	6.5	112
18'.	37	M	48	1500	Yes	228.1	2.2	22.5	1.2	7.02	2.0	6.8	-25.4	35	6.1	74
19.	62	M	48-72	ND	ND	41.5	0.0	15.6	12.4	6.65	4.3	3.2	-28.9	45	15	178
19'.	58	M	ND	ND	ND	112.4	0.0	ND	7.6	6.79	2.8	4.4	-31.2	50	5.6	175
20.	16	F	48	750	No	11.5	0.0	13.4	7.1	6.70	4.1	3.9	-33.6	25	12.5	191
20'.	28	F	24	500	No	44.0	0.0	ND	2.9	6.80	1.9	2.1	-33.9	46	5.1	93
21.	56	F	ND	ND	ND	67.4	0.0	ND	5.6	6.79	5.3	6	-31.0	50	11.1	121
21'.	67	F	48	ND	No	36.5	0.0	ND	12.1	6.75	4.0	4.1	-31.0	49	18.9	96
22.	32	F	30	22	No	10.1	0.0	6.9	3.0	6.99	3.0	5.2	-25.8	25	9.4	110
22'.	35	F	48	ND	No	32.8	0.0	14.8	8.3	6.80	4.0	8.6	-19.3	27	24.5	77
23.	63	M	48	ND	ND	123.3	0.0	ND	ND	6.85	3.5	4.6	-28.5	45	13.4	118
23'.	60	M	ND	ND	ND	55.2	0.0	ND	6.5	6.87	3.7	5.1	-27.0	37	6.9	79
24.	50	M	48	ND	No	20.3	0.0	ND	ND	7.25	2.7	8.8	-16.7	28	6.4	109
24'.	49	M	24	300	No	37.0	21.5	ND	ND	7.28	3.5	12.0	-12.8	26	6.0	82

(Continued)

No.	Age	G	Time to treatment (h)	Dose ingested (mL)	Coing. EtOH	MetOH (mmol/L)	EtOH (mmol/L)	Formate (mmol/L)	Lactate (mmol/l)	pH	pCO ₂ (kPa)	HCO ₃ ⁻ (mmol/l)	BD (mmol/l)	AG (mmol/l)	Glucose (mmol/L)	Creatinine (µmol/L)
25.	33	M	48	ND	ND	28.9	0.0	15.4	16.3	6.72	3.2	2.9	-34.6	49	19.5	199
25'	29	M	ND	ND	ND	29.0	0.0	ND	13.2	6.90	4.6	8.8	-22.4	46	21.5	171
	50 (16-73)	-	48 (11-72)	500 100-1200	-	43.1 10.1-123.2	0.0 0.0-25.6	13.5 1.0-19.9	6.0 1.1-16.3	6.99 6.65-7.39	3.4 1.0-7.9	5.2 2.0-20.9	-26.4 -3.5--38.1	32.2 18.1-54.8	9.4 (5.5-9.8)	110 (58-119)
	(range)															
	49 28-67		48 0-56	400 200-1500		44.0 6.2-228.1	0.0 0.0-96.8	14.8 0.0-25.2	6.1 0.5-15.6	7.02 6.63-7.44	3.8 1.8-9.5	5.7 2.1-23.7	-25.2 -0.6--25.2	33.0 11.0-50.0	7.8 2.9-24.5	93 45-175
	(range)															
	P _{F₅₀₀/EtH}	0.785	0.877	0.700		0.301	0.336	0.475	0.702	0.719	0.571	0.596	0.703	0.947	0.808	0.082

G, gender; M, male; F, female; Fom, fomepizole; EtOH, serum ethanol on admission; MetOH, serum methanol on admission; AG, anion gap; BD, base deficit; Md, median; R, range; ND, not determined; Coing. EtOH, coingestion of ethanol in other alcoholic beverages; *, ethanol was administered before the first measurement; **, bicarbonate was administered before the measurement. To convert from mg/L to mmol/L divide the concentration in mg/L on the following conversion factors: methanol - 32.05; ethanol - 46.08; formate - 46.03; lactate - 90.09; glucose - 180.18. To convert bicarbonate and base deficit from mmol/L to mEq/L use the conversion factor 1.0. To convert kPa to mmHg (torr) use the conversion factor 7.501. The lines numbered with apostrophe (1' - 25') indicate the patients treated with fomepizole, the lines numbered without apostrophe (1-25) indicate the patients treated with fomepizole.

Supplementary Appendix 2. Clinical features on admission, treatment, length of ICU-stay and outcomes in 25 patients treated with Fomepizole vs. 25 patients treated with Ethanol – the quasi-control groups.

No.	Clinical features	PSS	GCS	MAP	VP/IN	Pre-hospital ethanol				Folate	Hemodialysis	Total Fomepizole dose (g)	ICU LOS (days)	Outcome of poisoning
						Intubation	Alkalinization	VP/IN	hospital ethanol					
1.	GI.VD	1	15	85	No	No	No	No	No	EDD	2	2	VS, CS	
1'	GI.HA	1	15	92	No	No	No	No	Yes	-	-	5	NONE	
2.	VD.D.C	3	3	79	No	Yes	Yes	Yes	Yes	EDD + CV-VHD	5**	7	VS, CS	
2'	VD.D.GI.C.	3	3	96	No	Yes	No	No	No	CVVHD	-	3	DIED	
3.	GI.D.F.C	3	3	83	Yes	Yes	No	Yes	Yes	IHD + CVVHD	2*	10	VS, CS	
3'	GI.D.C.RA.	3	3	107	Yes	Yes	No	Yes	Yes	CVVHD	-	33	VS, CS	
4.	Inebriation	1	15	93	Yes	No	Yes	No	Yes	CVVHD	5*	6	NONE	
4'	Inebriation	1	15	100	No	No	Yes	No	Yes	CVVHD	-	4	NONE	
5.	GI.VD.D	3	15	88	No	No	Yes	Yes	Yes	CVVHDF	3*	4	NONE	
5'	HA.F	3	14	120	No	No	Yes	Yes	No	IHD	-	6	CS	
6.	GI.VD.C	3	5	78	No	Yes	Yes	Yes	No	CVVHDF	4.5*	22	VS, CS	
6'	D.CP.C	3	3	70	Yes	No	Yes	No	Yes	CVVHDF	-	23	VS, CS	
7.	CP.D.GI.VD	3	15	47	No	Yes	No	Yes	Yes	CVVHD	6	15	NONE	
7'	VD.CP.D.	3	11	93	Yes	Yes	Yes	Yes	Yes	CVVHD	-	11	VS, CS	
8.	D.GI.VD	3	15	98	No	No	Yes	Yes	Yes	IHD	1	2	VS***	
8'	D.GI.VD.	3	15	130	No	No	Yes	No	Yes	CVVHD	-	3	NONE	
9.	Inebriation	1	15	113	No	Yes	Yes	No	Yes	IHD	2	2	NONE	
9'	Inebriation	3	15	67	Yes	No	Yes	No	Yes	CVVHDF	-	3	CS	
10.	VD.GI	3	15	117	No	Yes	Yes	No	No	IHD	3**	3	NONE	
10'	VD.GI	3	15	103	No	Yes	Yes	Yes	Yes	IHD	-	2	VS, CS	
11.	VD.D	2	15	113	No	No	Yes	Yes	Yes	IHD	2.5*	3	VS	
11'	Inebriation	2	15	78	No	No	Yes	Yes	Yes	IHD	-	2	NONE	
12.	CP.D.RA.C.S	3	3	70	Yes	Yes	No	Yes	Yes	IHD + CVVHD	2.8*	2	DIED	
12'	GI.D.C.	3	3	127	Yes	Yes	Yes	Yes	Yes	CVVHDF	-	8	NONE	
13.	CP.D.GI.VD.C	3	3	84	Yes	No	Yes	Yes	Yes	EDD	6	15	DIED	
13'	GI.VD.C.	3	3	100	Yes	No	Yes	Yes	Yes	CVVHD	-	3	DIED	
14.	D.GI.VD.	2	13	43	Yes	Yes	No	Yes	Yes	CVVHD	2*	14	NONE	
14'	VD	3	15	105	No	ND	Yes	Yes	Yes	IHD	-	5	NONE	
15.	GI.D	1	12	92	Yes	Yes	Yes	Yes	Yes	IHD	2*	12	NONE	
15'	HA.F	1	15	103	No	No	No	No	No	IHD	-	8	NONE	
16.	D.GI.VD.C	3	3	104	No	Yes	Yes	Yes	Yes	CVVHD	1*	17	CS, VS	
16'	GI.D.VD.CP.C.	3	6	100	No	No	No	Yes	Yes	CVVHDF	-	16	DIED	
17.	GI	1	15	85	No	No	No	No	Yes	IHD	1	2	NONE	
17'	VD.HA.	2	15	118	No	Yes	Yes	Yes	Yes	CVVHDF	-	2	NONE	
18.	CP.GI.VD	3	12	127	No	Yes	Yes	Yes	Yes	EDD	4.5*	7	CS	
18'	GI.VD.D.F.	3	12	118	Yes	Yes	Yes	Yes	Yes	CVVHD	-	7	VS, CS	
19.	C.CP.D.VD	3	3	57	Yes	Yes	Yes	Yes	Yes	CVVHD	9*	6	DIED	
19'	C	3	5	103	Yes	Yes	Yes	Yes	Yes	IHD	-	9	VS, CS	

(Continued)

Supplementary Appendix 2. (Continued)

No.	Clinical features	PSS	GCS	MAP	VP/IN	Pre-hospital				Folate	Hemodialysis	Total fomepizole dose (g)	ICU LOS (days)	Outcome of poisoning
						ethanol	Intubation	Alkairization	Intubation					
20.	C	3	3	80	Yes	No	Yes	Yes	Yes	CVVH	3,5	8	DIED	
20'	GI.D.C.	3	6	91	No	No	Yes	Yes	Yes	CVVHDF	-	11	VS, CS	
21.	C	3	3	98	Yes	No	Yes	Yes	Yes	CVVH	2*	17	DIED	
21'	C	3	3	78	Yes	No	Yes	Yes	Yes	CVVHD	-	2	DIED	
22.	GI.VD.D	3	8	85	Yes	No	Yes	Yes	No	EDD	1*	3	CS	
22'	GI.D.C.	3	4	63	Yes	No	Yes	Yes	Yes	CVVHDF	-	5	NONE	
23.	C.R.A	3	3	97	Yes	No	Yes	Yes	Yes	CVVHD	2*	5	DIED	
23'	GI.VD	3	10	93	Yes	No	Yes	Yes	Yes	CVVHD	-	15	VS, CS	
24.	Inebriation	2	15	127	No	No	Yes	Yes	Yes	IHD	1*	4	NONE	
24'	GI.HA	2	15	120	No	Yes	No	No	Yes	IHD	-	5	NONE	
25.	GI.VD.C	3	5	73	Yes	No	Yes	Yes	Yes	CVVHDF	2*	15	VS, CS	
25'	GI.HA.CA.C.	3	3	70	Yes	No	Yes	Yes	Yes	CVVHD	-	11	DIED	
	Total F (n = 25)	1-5			No-13	No-17	No-9	No-5	No-5	IHD-9			NONE-9	
		2-3			Yes-12	Yes-8	Yes-16	Yes-20	Yes-20	CVVHD/F-14			VS/CS-10	
	Total E (n = 25)	3-17			No-13	No-16	No-11	No-6	No-3	EDD-5			DIED-6	
		1-4			Yes-12	Yes-8	Yes-14	Yes-19	Yes-22	IHD-7			NONE-10	
		2-3			ND-1	ND-1				CVVHD/F-17			VS/CS-10	
		3-18											DIED-5	
	Md F (range)		12 3-15	85 43-127	1.00	0.921	0.564	0.733	0.440	0.471	2.0 1.0-9.0	6.0 2.0-22.0	0.705	
	Md E (range)		11 3-15	100 63-130							0	5.0 2.0-33.0		
	P Fom/Eth	0.729	0.980	0.255							<0.001	0.951		

VD, visual disturbances; GI, gastrointestinal symptoms; D, dyspnea; CP, chest pain; C, coma; RA, respiratory arrest; PSS, Poisoning Severity Score; GCS, Glasgow coma scale; MAP, mean arterial pressure; VP/IN, vasopressors/inotropes administration; Alkairization, administration of 8.4% or 4.2% bicarbonate i.v. to correct metabolic acidosis; AF, acidum folicum; Leuc, Leucovorine (acidum folicum i.v.); HD, hemodialysis; IHD, intermittent hemodialysis; EDD, extended daily hemodialysis; CVVHD, continuous veno-venous hemodialysis; CVVHDF, continuous veno-venous hemodiafiltration; CVVH, continuous veno-venous hemofiltration; SIRS, systemic inflammatory response syndrome; MODS, multiple organ dysfunction syndrome; ICU LOS, intensive care unit length of stay; Fom, fomepizole; Control examination, examination 3-6 months after discharge from hospital; VS, long-term visual sequelae; CS, long-term CNS sequelae; *, initial dose of ethanol was administered before fomepizole application; **, ethanol administration followed the treatment with fomepizole after methanol concentration decreased below 30 mg/dL (9.4 mmol/L); ***, symptoms of regressing pseudopapillitis on discharge. The lines numbered with apostrophe (1' - 25') indicate the patients treated with ethanol; the lines numbered without apostrophe (1-25) indicate the patients treated with fomepizole.