

## CASES OF NON-CLINICALLY MANIFESTED METHANOL INTOXICATIONS – DIAGNOSTICS AND BEHAVIOUR

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### SUMMARY:

The high toxicity of methyl alcohol is usually related to the created formaldehyde and formic acid in organisms. Some researchers, however, assign the high toxicity to other factors such as the long-time circulation of methyl alcohol in blood in an unaffected fashion. For that reason, in cases of non clinically manifested intoxications, the results of the chemical and toxicological analysis play core and very important role for the diagnostics and follow up treatment procedures.

**Key words:** methyl alcohol; acute poisoning.

The purpose of this research is to study the importance of the chemical and toxicological tests for the diagnostics and for the treatment of acute intoxications with methyl alcohol without clinical manifestation.

### SAMPLE AND METHODS.

Presented are 5 cases of methanol intoxications without clinical behavior. Diagnostics has been

completed upon receiving data of the chemical and toxicological analysis Treatment proceeded as per continuous poison and antidote control in blood and urine. The concentrations of the two alcohols are defined using the gas chromatographical method for analysis of organic solvents.

### RESULTS AND DISCUSSIONS.

Described intoxications are observed in patients who regularly consume ethyl alcohol. The results of the toxicological and the chemical analysis when patients entered the clinic show lethal methanol quantities in blood. Antidote treatment complies with the concentrations of the two types of alcohol. Bio-monitoring data is shown in Table 1.

### CONCLUSION.

In cases of non clinically manifested methanol intoxications, toxicological and chemical diagnostics as well as the continuous control of methyl and ethyl quantity in the blood and urine play a decisive role for the adequate clinical behavior and effective treatment.

**Table 1.** Concentrations of methanol and ethanol in blood and urine

		NAME	N.N.B.	B.G.I.	T.G.A.	T.S.G.	I.K.S.
1 h	BLOOD	MET. (g/l)	4.142	1.723	0.025	1.212	1.662
		ET. (g/l)	0.009	(-)	(-)	(-)	(-)
	URINE	MET. (g/l)					
		ET. (g/l)					
3 h	BLOOD	MET.	3.232	0.965		0.788	1.820
		ET.	0.032	0.016		0.044	(-)
	URINE	MET.					
		ET.					

6 h	BLOOD	MET.	2.948	0.743		0.967	1.504
		ET.	0.177	0.139		0.170	0.857
	URINE	MET.	3.344				
		ET.	0.107				
9 h	BLOOD	MET.		0.768			
		ET.		0.016			
	URINE	MET.		0.992			
		ET.		0.024			
12 h	BLOOD	MET.	2.514	0.618		0.990	
		ET.	0.534	0.057		0.800	
	URINE	MET.	3.282	0.738		1.049	1.731
		ET.	0.801	0.011		0.983	1.508
21 h	BLOOD	MET.	4.111	0.591		0.847	2.212
		ET.	0.437	0.221		0.090	1.453
	URINE	MET.	3.925	0.607		1.023	2.178
		ET.	0.342	0.339		0.052	1.873
24 h	BLOOD	MET.	2.702				
		ET.	0.314				
	URINE	MET.					
		ET.					
30 h	BLOOD	MET.	3.399	0.488		0.765	
		ET.	1.134	0.283		0.309	
	URINE	MET.	3.514	0.481		0.752	1.968
		ET.	1.336	(-)		0.327	2.079
48 h	BLOOD	MET.	1.759	0.136		0.292	0.934
		ET.	0.047	(-)		(-)	0.422
	URINE	MET.	1.806	0.193		0.345	0.918
		ET.	0.399	(-)		0.021	0.374
60 h	BLOOD	MET.	0.696	(-)		(-)	0.478
		ET.	(-)	(-)		(-)	(-)
	URINE	MET.	1.027	0.047		0.035	0.573
		ET.	(-)	(-)		(-)	(-)
72 h	BLOOD	MET.	0.458	(-)			0.352
		ET.	(-)	(-)			0.163
	URINE	MET.	0.523	(-)			0.397
		ET.	0.117	(-)			(-)
96 h	BLOOD	MET.	0.026				0.049
		ET.	(-)				(-)
	URINE	MET.	0.108				0.092
		ET.	(-)				(-)

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