



### Realgar wine poisoning

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**Objective:** Realgar (Xiong Huang) is an arsenic-containing chemical substances widely used in traditional Chinese medicine as antidote or insecticide. However, few people know that realgar wine might be harmful to health. Here we present 2 cases about acute realgar wine toxicity.

**Case report:** A man and his mother consumed 300-400 c.c. mixed realgar wine (pure realgar wine about 50cc, mixed with Chinese herbs all together within 800cc boiled water) on a winter night. They developed gastrointestinal discomfort after drinking the wine (including nausea/vomiting and cramping epigastric pain). The man presented to the emergency department for help immediately, while his mother came to hospital 2 days later when the symptoms continued. Details of the laboratory data and management are shown in the table below. According to a follow-up phone call, both of them had symptoms that improved within one week.

**Conclusion:** Realgar, as a traditional medicine, has been widely used orally and appears to be less toxic than arsenic trioxide. The initial clinical features of acute arsenic poisoning invariably relate to the gastrointestinal system and include nausea, vomiting, colicky abdominal pain, and profuse watery diarrhea. Treatment of acute arsenic toxicity is supportive. The efficacy of chelation therapy in patients exposed to realgar wine poisoning is lacking. Our two patients were treated by different methods, but their symptoms both persisted a week. However, unrefined realgar mineral might contain other more toxic arsenic forms, such as arsenic trioxide. Therefore, people should be reminded that drinking massive amount might be lethal.

Age (y)	Gender	Medical history	Symptoms and signs	Cr (mg/dL)	Arsenic level (mg/L)		Hemolysis	Management
					Blood	Urine		
45	Male	Nil	Nausea, vomiting, cramping epigastric pain	0.88	92	4848	nil	Ethylenediamine tetraacetic acid (EDTA)
68	Female	Hyperthyroidism, Diabetes mellitus, Coronary artery disease	Nausea, vomiting, cramping epigastric pain	1.02	1 <sup>st</sup> day		nil	Intravenous acetylcysteine
					98.2	4731.9		
					4 <sup>th</sup> day			
					59.8	2982.2		