

## **Acute respiratory distress syndrome following inhalation of cinnabar fume**

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**Objective:** Cinnabar, a traditional Chinese remedy, is mainly made of mercuric sulfide. Inhalation of cinnabar fume is rare but can result in severe lung injury and even fatality. We reported a case who developed acute respiratory distress syndrome and death after the inhalation of cinnabar fume. **Case report:** A 73-year-old male inhaled the fume of cinnabar in an attempt to treat insomnia. Although he had better sleep in the first night of exposure, he presented to the emergent department of a local hospital with dizziness, general weakness, severe cough, and progressive dyspnea after 3-hour exposure for 2 consecutive days. He received oxygen and steroid therapy, however, respiratory distress was worsened and chest X-ray revealed the presence of diffusely increased infiltration in bilateral lungs. Acute respiratory distress syndrome was diagnosed and he was given endotracheal intubation and assisted ventilation on day 7. On day 10, he was transferred to a medical center for chelating therapy. Blood mercury concentration on that day was increased at 319.1 g/L. Both 2,3-dimercapto-1-propanesulfonic acid (DMPS) and n-acetyl cysteine were immediately commenced as chelating agents. Although follow-up blood mercury levels were markedly decreased to 31.4 g/L after the aforementioned therapy, his clinical condition deteriorated. The patient died on day 18 due to extreme hypoxemia. **Conclusion:** Inhalation of inorganic mercury from cinnabar can lead to acute respiratory distress syndrome and subsequent death. The role of chelating agents, such as DMPS and n-acetyl cysteine, under such circumstances remains unclear and may even be futile. The reported case highlights the potential serious toxicity of certain traditional remedies that contain heavy metals and the necessity of educating the public about the judicious use of such remedies. **Reference:** 1.Ho BS, Lin JL, Huang CC, Tsai YH, Lin MC. Mercury vapor inhalation from Chinese red (Cinnabar). *J Toxicol Clin Toxicol.* 2003;41(1):75-8. 2. Rowens B, Guerrero-Betancourt D, Gottlieb CA, Boyes RJ, Eichenhorn MS. Respiratory failure and death following acute inhalation of mercury vapor. A clinical and histological perspective. *Chest* 1991;99(1):185-90. 3. Toet AE, Vandijk A, & Savelkoul TJF: Mercury kinetics in a case of severe mercuric chloride poisoning treated with dimercapto-1-propane sulphonate(DMPS). *Human Exp Toxicol* 1994; 13:11-6.