



Is Yellow Phosphorus Dangerous Only Because It Looks Like Chocolate?

Sarı Fosfor Sadece Çikolataya Benzediğinden Dolayı mı Tehlikeli?

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Dear Editor;

Yellow phosphorus is an inorganic material used in fireworks, explosive toys, fertilizer production, and chemicals against rodents. It has a very sharp smell similar to that of garlic. It is commonly known as "fire crackers," and "çatpat" or "çatapat" in Turkish. This inflammable and explosive material is an explosive toy material produced as a mixture of chlorate and yellow phosphorus. Because of its chocolate brown colour, there have been many reports of poisoning cases following accidental oral ingestion by small children. The mother of our 18-year-old male patient brought to the ER by 112 emergency services related the patient's story: that the patient had had the 'thing' what he called 'popping candy' about 4 hours ago. As a result of the information received from other relatives of the patient, it was learnt that the patient consumed an excessive amount of the substance called "fire crackers." They also reported that the symptoms occurred about two or two and a half hours after the intake. It was told that he first had a sore throat followed by a sudden onset of nausea, and then vomiting, loss of vision and difficulty in breathing. The patient had difficulty in breathing when he was brought to the emergency clinic. Due to high doses of yellow phosphorus intake, the patient was first afflicted by respiratory arrest succeeded by asystole. The patient was then intubated. Despite the attempts in our emergency service and the cardiopulmonary resuscitation, the patient could not be saved. It was assumed that the patient might have had psychological disorders and thus had committed suicide. There were no other notable diseases in his story. Moreover, we did not observe any findings suggestive of additional drug intake except for the suspected substances observed.

Poisoning due to yellow phosphorus can occur as a result of suicide or accidental intakes. The substance reaches its highest level in blood 2-3 hours after oral ingestion. Once ingested, it spreads to all tissues, especially accumulating in the liver. In poisoning connected to yellow phosphorus, there is burning pain in the throat and the stomach. There is the characteristic

smell of garlic in breath, vomit and excrement. Nausea, vomiting and diarrhoea can be observed. Hepatic failure eventually results in coagulopathy (1,2).

Acute liver failure table is seen in 48-72 hours following intoxication (2). In addition to these symptoms, oliguria, hematuria, anuria, skin burns and bleeding, and cardiac toxicity can occur. More to the point, symptoms indicating an affected central nervous system, confusion, psychosis, hallucinations, sudden blindness and coma may also take place. There is no unique antidote for yellow phosphorus poisoning (3).

Close monitoring of renal and hepatic enzymes and symptomatic treatment is recommended. Recently, poisonings associated with such substances have been raised in the media, however, though restraints are carried out, they are insufficient.

As a result, the production of explosives toy materials should be kept under control or, if possible, should be prohibited. They shouldn't be produced in the shape of candy, chocolate and other foodstuffs. Not only of these toys, but the production of fireworks and drugs used against rodents must also be kept under control. In this way, the safest way to deal with the oral intake of such a deadly substance can be preventing the production. In other words, the production and sales of these substances must be monitored. These substances should be kept away from children. Physicians working in the emergency departments should be familiar with the symptoms, diagnosis and treatment of yellow phosphorus poisoning.

Best regards.

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