

An Interesting Way of Thinner Abuse: A Case Report

Yeliz Şimşek, Esra Mercanoğlu Efe

Abstract: *Thinner (Toluene), that is used as a solvent in industrial area, is an aromatic hydrocarbon material. Because it is cheap and easy attainable, it is common in all over the world. Toluene is commonly abused by inhaling to get a sensation of euphoria. Our case is a 40 year old male who was developed skin lesions by thinner self-injection to eight different part of his body. Abscess formation was developed at his injection areas but no systemic signs were observed in this case. Many local and systemic signs are developed after thinner abuse. These signs can be acute or chronic. This skin lesion that occurred after administration of thinner in an uncommon way is considerably demonstrative in the present case.*

Keywords: thinner, emergency service, aromatic hydrocarbon

1. Introduction

Thinner (Toluene), that is used as a solvent in industrial area, is an aromatic hydrocarbon material. Because it is cheap and easy attainable, it is common in all over the world especially in children and adolescents. The most common way of its abuse is via inhalation. It causes euphoria (1). Our case administered thinner to his body in an uncommon and interesting way.

2. Case

A 40 year old male was admitted to the emergency service because of lesions on his body. At admission his arterial blood pressure, heart rate and body temperature were monitored and recorded as 110/70 mmHg, 90 beats/min, 37.9°C respectively. He was conscious but depressive and apathetic. His self care seemed to be decreased. In his physical examination, eight hyperemic, sensitive, palpable, yellow in the middle and fluctuative, nodular lesions were observed in the anterior thorax and pelvic region (Figure). From his history, it was understood that he had self-injected thinner to his body.

Considering that the lesions might be in abscess formation, one of them was drained from the most fluctuating part. Drainage material was yellow and purulent. For differential diagnosis cranial tomography was performed and complete blood count, liver and kidney function tests were analysed. The results of tests were in normal range except the leukocyte level (16000/uL). No microorganism could be developed in the material culture. Hemodynamics of patient was stable during nursing. The lesions were recovered after dressing. The patient was diagnosed as psychosis by the psychiatrist. He was discharged on the next day with medication of anti-psychosis.

3. Discussion

Thinner abuse is seen very common because of its cheapness and easy accessibility. Because of its lipophilicity, it may affect central nervous system. It causes acute or chronic several symptoms. Death from its toxicity is due to anoxia, respiratory depression, vagal stimulation and cardiac arrhythmia (1). Thinner abuse is commonly via inhalation way. It may also cause metabolic insufficiency like

hypokalemia, hypercloreemia, metabolic acidosis and hypocalsemia (2,3). Chronic toluene inhalation causes central nervous system, cardiac, renal and liver damage (1). In a case of one month toluene exposure, magnetic resonance image showed hypointense areas in white matter of brain (4). Because chronic thinner abuse causes symptoms like schizophrenia, psychosis, apathetic mood, thinner abuse should be kept in mind during physicatric examination (5,6). Also, the physicatric disorder in our case might be due to chronic thinner inhalation.

In literature there is a case report of toluene self-injection via intrathoracic region for the aim of suicide attempt. Pleural empyema was developed in this case after injection(7). In a study made with children, it was found that oral acute thinner toxicity might have caused non-infectious fever due to lipid peroxidation in the brain (8).

Our case self-administered thinner to his body in an uncommon way that was self-injection and no systemic reaction was observed.

As a result, we believe that this case will help the clinicians keep in mind that pathologic lesions might be due to an interesting way of thinner abuse which is injection, especially when patient seems to have some physicatric problems together because of chronic thinner abuse.



References

- [1] Toluene Toxicity. **Nathanael J McKeown**. Update: Feb 8 2013 <http://emedicine.medscape.com/article/818939-overview>
- [2] J Baskerville, G Tichenor, and P Rosen. Toluene induced hypokalaemia: case report and literature review. *Emerg Med J*. 2001 Nov; 18(6): 514–516.
- [3] Tang HL, Chu KH, Cheuk A, Tsang WK, Chan HW, Tong KL. Renal tubular acidosis and severe hypophosphataemia due to toluene inhalation. *Hong Kong Med J*. 2005 Feb;11(1):50-3.
- [4] K S Caldemeyer, R M Pascuzzi, C C Moran, R R Smith. Toluene Abuse Causing Reduced MR Signal Intensity in the Brain. *American Journal of Roentgenology*. 1994;161(6):1259-61.
- [5] Mohd Isa MF, Zain NR, Gaillard F, Chee KY. Toluene dependency, psychosis, and cerebellar syndrome. *J Neuropsychiatry Clin Neurosci*. 2013 Spring;25(2):E42-3.
- [6] Rao NP, Gupta A, Sreejayan K, Chand PK, Benegal V, Murthy P. Toluene associated schizophrenia-like psychosis. *Indian J Psychiatry*. 2009 Oct-Dec;51(4):329-30.
- [7] Solak I, Cankayali I, Aksu H, Moral AR. An interesting thinner intoxication case: intrathoracic injection. *Adv Ther*. 2006 May-Jun;23(3):502-5.
- [8] Benan Bayrakçı, MD^a, Murat ŞahİN, MD^b, Maide Özen, MD^c, Şule Ünal, MD^d. Thinner Ingestion Causes Hyperthermia. *Türkiye Klinikleri J Med Sci* 2009;29(2):416-9.