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Progressive optic neuropathy and sensorineuronal hearing loss due to chronic glue sniffing.

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References

Sir: The recent case report by Ehyai and Freemon calling attention to the neurotoxicity of chronic glue-sniffing merits several comments.¹ For the past 25 years, scattered case reports have appeared in the literature addressing the issue of the central and peripheral nervous system toxicities of inhalant abuse of various kinds, including paints, lacquers, paint thinners, gasoline, glue, and toluene. With the exception of experimental studies, insufficient attention has been given to the precise volatile organic constituents of these compounds in clinical reports of toxicity in humans. Unfortunately, this has erroneously lead to the concept that toluene is toxic to the peripheral nervous system.

The literature is replete with reports of polyneuropathy caused by the inhalation of various organic solvents, including the well known "glue-sniffers" and "huffer's" neuropathy.² The clinical setting in which this polyneuropathy occurs is exclusively in those patients who abuse solvents or glue containing both toluene and n-hexane, or toluene and another organic volatile substance. Korobkin has reported the case of a patient whose polyneuropathy reversed completely when he switched from glue containing toluene and n-hexane to pure toluene.³ Experimental n-hexane neuropathy has been produced by Schaumberg,⁴ and noted by Herskowitz⁵ as a consequence of industrial exposure in humans.

The central nervous system toxicity of toluene continues to be documented at an alarming rate.⁶ Sensorineuronal hearing loss,⁶⁻⁸ optic atrophy and abnormalities of visual evoked responses,⁹ also noted by Ehyai, deserve emphasis. The reversibility of the central neurotoxic effects remains very much in question. The "permanent" cerebellar dysfunction noted in this report is without appropriate follow-up or abstinence. Improvement and complete reversibility of central nervous system disorder has been reported within months of cessation of toluene abuse.^{8,10} Unfortunately, the highly addictive nature of the substance and its ready availability makes a period of sustained abstinence and follow-up in these patients difficult to achieve, except in rare cases of inadvertent exposure.

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