

CASE REPORT

LINDANE TOXICITY IN A 7 YEAR OLD BOY

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Lindane (gamma-benzene hexachloride) is widely used as a scabicide by general practitioners and dermatologists in Pakistan. We present a case of a 7 year old boy who had suffered from scabies 1 week ago, for which he was prescribed lindane along with other medications by a general practitioner. After 3 application of lindane the child began to experience Grand mal seizures, ataxia, weakness, incoordination and severe burning paresthesias. Lindane is known to cause neurotoxicity and for this it has been recommended as a 2nd line treatment for scabies by FDA.

Keywords: lindane, scabicide, topical application, toxicity, adverse effects, neurotoxic, children

INTRODUCTION

Lindane Lotion is approved by FDA as a 2nd line treatment for scabies where first line treatment permethrin has either failed or is contra-indicated.¹ Lindane is a neurotoxin that interferes with GABA neurotransmitter by interacting with GABA_A-Cl⁻ channel complex at picrotoxin binding site. In humans, lindane affects nervous system, liver, and kidneys, and is a potential carcinogen.^{2,3,5}

It has a documented neurotoxicity, i.e., high frequency of seizures, paresthesias, incoordination etc. It should be used carefully in children, old age and immunocompromised people.²

CASE REPORT

A 7 year old boy, reported to a private clinic with a history of generalised tonic clonic seizures (2 episodes, each lasting 7–10 minutes in last 10 hours), ataxia, weakness and severe burning paresthesias for last 5–6 hours. His mother gave history of Scabies and consequent application of lindane lotion 3 times in 4 days. After 3rd application, the child suffered a bout of myoclonic jerks and 2–3 hours afterwards he started having generalised tonic clonic seizures. Child was immediately brought to hospital where on examination the child had Glasgow Coma Score 15/15, was unable to stand with ataxic gait, nystagmus, past-pointing and dysidochokinesia. Blood CP and other baseline investigations were done and were normal. He was given diazepam 0.2 ml (1.25 mg) slow IV to control the seizures. He was also given 5% glucose in water infusion with furosemide for forced diuresis. He was given frequent baths and his clothes were changed. Topical ointments being applied by the patient were stopped and replaced by Calamine lotion. Levocetirizine was given to relieve pruritus. The child remained in ICU overnight, and was discharged after 2 days.

DISCUSSION

Lindane is a scabicide, which is approved by FDA as a 2nd line agent in management of scabies. Both EPA and WHO classify lindane as moderately acutely toxic.⁴ It is highly toxic to nerves, resulting in seizures, ataxia, paresthesias and death on numerous occasions.² It also affects haematological system and carries a significant cancer risk.⁵ A view of literature reveals that most cases of acute lindane toxicity resulting from topical application have occurred in paediatric and geriatric patients and are manifested by grand mal seizures.^{6,7} In Pakistan, lindane is prescribed by general practitioners and dermatologists as 1st line therapy for scabies. Keeping in view the severity of its toxic effects lindane should be discouraged for use as a 1st line treatment for scabies.

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