

# Accidental Endosulfan Poisoning in an Infant Presenting as Status Epilepticus from a Rural Village of Haryana, North India

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## Abstract

Endosulfan poisoning has been reported in young adult farmers from rural areas of Haryana in north India.<sup>1</sup> We report a case of status epilepticus from endosulfan poisoning in an infant from a rural village to highlight, that infants form another high risk population for endosulfan poisoning due to their proximity to farming fields. We highlight that good and timely clinical care can potentially save many lives with this under-reported menace, and discuss the need of forming a prospective surveillance to accurately reflect the epidemiology of endosulfan poisoning in rural areas of north India.

A 1-year-old infant presented in the emergency department of a community hospital with confirmed history of ingestion of 10 mill-liters of endosulfan (Endo-chithin®). Child presented with difficult-to-treat generalized seizures requiring multiple anticonvulsants, calcium infusions, pralidoxime, atropine, gastric decontamination with activated charcoal and supportive ventilator therapy. Initial Investigations revealed: Abnormal liver function tests (SGPT/SGOT: 1380/915 IU/l), hyperglycemia (165 mg/dl), and hypocalcaemia (6.5 mg/dl). Rest of the laboratory parameters were within normal limits. Clinical examination was remarkable for the presence of tachycardia without any arrhythmias. Child could be quickly weaned from the ventilator with gradual improvement in sensorium and liver enzymes. Successful discharge could be achieved at fifth day of admission. 18-month neuro-developmental examination was unremarkable.

Endosulfan poisoning has been reported in an infant from a rural area of south India, but never in infants from rural areas of north India.<sup>2</sup> Attempts to study the epidemiology of poisoning using prospective surveillance registers in rural

north India have not been made.<sup>3</sup> The only detailed information on epidemiology of childhood poisoning comes either from the National Poisoning Information Centre at All India Institute of Sciences (AIIMS), New Delhi or from tertiary level centers and medical schools.<sup>3,4</sup> This in no way reflects the status of uninvestigated and unreported causes of deaths due to poisoning in infants and children in rural India, which may be frequently labeled wrongly as viral encephalitic illnesses.<sup>5</sup> Sri Lanka is a noteworthy example in South Asia, where substantial reductions in mortality and morbidity have been noted by forming a prospective surveillance mechanism, and banning this poison.<sup>6</sup>

The present report leads to the speculation, that infant's in rural north India could be another population at high risk of endosulfan poisoning due to their proximity of farming fields, prevalence of anemia in rural children leading to pica, and contamination of soil and vegetables by organo-chlorine pesticides in rural India.<sup>7, 8</sup>

Availability of skilled manpower and state-of art emergency and intensive care services at the community level hospital were crucial in saving the life of this infant.

Prospective surveillance registries on the model of Sri Lanka seems to be needed in rural areas of north India to accurately assess the epidemiology of organo-chlorine poisoning, and further proactive action. Favorable clinical outcome in the present case reveals that mortality with endosulfan poisoning can be reduced by upgrading clinical services at the community and rural hospitals in north India.

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