Jatropha Curcas Poisoning

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Letter to the Editor

Jatropha Curcas Poisoning

Sir,

We have read with great interest the clinical brief entitled "Jatropha curcas – Poisoning" by Kulkarni *et al*[1] published in the 2005 January issue of The Indian Journal of Pediatrics. The authors[1] haven't reviewed the available literature on Jatropha curcas poisoning in humans diligently. Since the available literature is scarce, it would have been more appropriate to compare the clinical presentation encountered in their[1] case series with the already published reports authored by Abdu-Aguye *et al*[2] and Joubert *et al*[3], under discussion. Levin *et al*[4] reported Jatropha multifida (related to Jatropha curcas) intoxication in two children. Interestingly all the victims of Jatropha poisoning in the aforementioned reports[1-4] have been children.

In the abstract, the authors[1] mention that mortality is rare with Jatropha curcas poisoning. However, in the discussion, they contradict their own statement and mention that human deaths by Jatropha curcas intoxication have not been reported so far, though animal deaths have occurred. In our opinion, the latter statement holds good.

The authors[1] write that the toxic dose of Jatropha curcas is not known. However, they[1] continue to mention that in some instances consumption of as few as 3 seeds has produced toxic symptoms; while in others, as many as 50 seeds produced relatively mild symptoms. No peer-reviewed article or reference accompanies this statement, and if it is mentioned based on anecdotes or unreferenced opinions, it should be read with a critical eye. If the aforementioned data has been published, then the reference should have been appropriately cited. The authors[1] also mention that there is ample information about Jatropha curcas in textbooks of other sciences. Again, this statement is not supported by a reference. They[1] further add on to write that though it is commonly believed that roasting detoxifies the seeds, catastrophes have been reported after eating roasted seeds. This unreferenced statement needs to be critically viewed. The objective of discussing the outcome of inadvertent consumption of different parts of Jatropha curcas plant hasn't been addressed by the authors[1].

We would like to further add to the various uses of Jatropha mentioned by the authors.[1] Jatropha seed oil is being tried as a biofuel.[5] The Central Salt and Marine Chemicals Research Institute (CSMCRI), a Government-owned industrial research institute in India, is aiming to cultivate Jatropha plant for the production of biodiesel.[5] Jatropha is relatively easy to grow and can be cultivated on wastelands.[5] Large scale plantations are being encouraged, and a Government policy will be required for Jatropha plantation, where subsidy is given for use of wastelands and fertile land cultivation is discouraged.[5] This is the only solution to protect useful farmlands for other crops.[5]

Eventually, with the increase in Jatropha cultivation in the years to come, there is a likelihood of an increase in the incidence of accidental poisoning with Jatropha. This makes it peremptory to provide more toxicological information to the treating physicians, especially those practicing in rural regions. About 10-15 isolated cases of Jatropha poisoning per year are reported to the authors (unpublished data).[1] The medical fraternity would benefit if Kulkarni *et al*[1] publish the epidemiological data on Jatropha poisoning in their region, in the near future.

Incidentally, as already mentioned, all the Jatropha poisoning victims reported have been in the pediatric age group.[1-4] In general, accidental pediatric poisoning must be recognized as a global public health problem with significant opportunities for prevention. Effective prevention of accidental pediatric poisoning requires programmes and policies that address known risk factors. Local data collection or surveillance is required to identify specific risk factors associated with accidental pediatric poisoning in a particular region.

Parents and caretakers should be made aware of the potential toxicological dangers that children may come across, and this would certainly reduce accidental pediatric poisoning emergencies and financial burden on the community.[6] Older children should be taught in schools to avoid experimentation with unfamiliar plant substances and household chemicals.[6]

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REFERENCES

1. Kulkarni ML, Sreekar H, Keshavamurthy KS, Shenoy N. Jatropha curcas – poisoning. *The Indian J Pediatr* 2005; 72 : 75-76.
2. Abdu-Aguye I, Sannusi A, Alafiya-Tayo RA, Bhusnurmath SR. Acute toxicity studies with Jatropha curcas L. *Hum Toxicol* 1986; 5 : 269-274.
3. Joubert PH, Brown JM, Hay IT, Sebata PD. Acute poisoning with Jatropha curcas (purging nut tree) in children. *S Afr Med J* 1984; 65: 729-730.
4. Levin Y, Sherer Y, Bibi H, Schlesinger M, Hay E. Rare Jatropha multifida intoxication in two children. *J Emerg Med* 2000; 19: 173-175.
5. Singh S, Mehta RS. Environment - Jatropha biodiesel. *Autocar India* 2005; 7 : 169-175.
6. Lall SB. Accidental pediatric poisoning – a preventable medical emergency (Editorial). *Indian J Pediatr* 1998; 65 : 363-364.