

Snakebite and severe hypertension: Looking for the Holy Grail

Sir

The informative case report by Ahmed *et al.*^[1] made us realize the clinical importance of elevated blood pressure in snake bite, recall pathogenesis, and revive educational aspects, based on our earlier experiences.^[2] From the description made by the authors,^[1] the offending snake in this report is likely to be krait.

In developing countries where snakebites are ubiquitous, it is worth considering krait bite if *pain abdomen* precedes *paralysis*. The third "P" denotes potassium level, which invariably is low in many cases.^[3] Also, in a given clinical setting with elevated BP in a child with a background history of paralysis following pain abdomen, without any renal manifestations or antecedent history of encephalitis, bulbar poliomyelitis, or Guillain Barre Syndrome, one has to include krait bite in the differential diagnosis. In addition to the reasons stated by the authors for elevated BP, other mechanisms are neuromuscular blockade at bulbar level, neurotoxin venom-induced release of catecholamines, decreased parasympathetic stimulation, and dysautonomia.^[3] Slow recovery in this child.^[1] may be attributable to delay in administration of anti snake venom and irreversible binding of venom to presynaptic receptor, as recovery occurs only with the generation of new neuromuscular junctions.

Therapeutically though nitroglycerin infusion was beneficial, usefulness of angiotensin-converting-enzyme (ACE) inhibitors in hypertension due to snake bite was documented earlier.^[4] Practitioners and emergency physicians have to avoid beta-blockers in snake venom-induced hypertension, as these agents are likely to precipitate severe alpha-agonist effects via the blockage of beta-receptor effects.^[2] The mechanism for snakebite-induced hypertension, importance of recognizing this entity in acute-onset hypertension in the emergency room, differentiating this from other causes of secondary hypertension,

and the need for administration of anti snake venom should be instilled in the minds of students of health sciences, and incorporated in teaching and training programs.

Overall, early recognition and appropriate management with the anti snake venom and supportive measures not only save the patient^[5] but also prevent further progression or deterioration of clinical status, since hypertension due to snake bite is completely reversible.

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