

diagnosis of Kabuki syndrome was made, based on the characteristic clinical features.

Most of the patients of Kabuki syndrome have five cardinal manifestation, namely, the characteristic facial features (100%), skeletal abnormalities (over 90%), postnatal growth deficiency (over 70%), mild mental retardation (over 90%) and dermatoglyphic abnormalities (over 95%). Our patient had all of the cardinal manifestations(2).

Digilio, *et al.* reported at least 58% of patients with Kabuki syndrome had congenital heart diseases and considered them as cardinal features(3) Renal, hepatobiliary(4) and diaphragmatic(5) anomalies are also reported in this syndrome. This is the first Indian report of Kabuki syndrome with a diaphragmatic abnormality.

Because Kabuki syndrome is not associated with severe medical complications, it is presumed that the prognosis for survival into adulthood is good.

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## Snakebite Envenomation in India: A Rural Medical Emergency

Snakebite is a common medical emergency encountered among Indian population(1). According to World Health Organisation, 15,000 people of 2,00,000 bitten by snakes die every year in India(2). The number may be

more owing to the lack of proper documentation and the uncounted deaths that occur before reaching the hospital. Most of the affected, including children are from rural areas. Data on snakebite envenomation among Indian children are limited.

A retrospective study was carried out in the Department of Pediatrics, Jawaharlal Institute of Post Graduate Medical Education and

**TABLE I**—*Clinical Profile of Snake Bites Envenomation in Children*

| Feature  | n(%)     |
|--|----------|
| Hemotoxic bites  | 42 (84%) |
| Neurotoxic bites                                       | 8 (16%)  |
| No. of deaths<br>(all hemotoxic bites)                 | 9 (18%)  |
| Disseminated intra-vascular coagulation                | 5 (10%)  |
| Acute renal failure                                    | 9 (18%)  |
| Local cellulitis                                       | 33(66%)  |
| Average ASV required                                   | 100 ml   |
| Anaphylaxis to ASV                                     | 6(12%)   |
| Ventilatory support required<br>(all neurotoxic bites) | 4 (8%)   |
| Average PICU stay                                      | 2 days   |

Research (JIPMER), a tertiary care hospital at Pondicherry to study the clinical profile of snake bite envenomation. During a period of 34 months (Nov 2002 to Aug 2005) 50 children (9 months to 12 years of age) were admitted for snake bite envenomation. Their clinical profile is given in *Table I*.

Most of the poisonous snakes noted in this area belong to the hemotoxic group. The mortality in hemotoxic group (9/42) is more than the neurotoxic group (0/8). Fifty per cent children with neurotoxicity required mechanical ventilation. The pediatric data presented above is only the tip of the iceberg. Several factors like inappropriate first aid, delay in ASV administration, and anaphylaxis to ASV may affect the outcome. Harmful practices especially tight tourniquet applications and unnecessary surgical procedures add

to the morbidity and unscientific methods like 'black stone' healing contribute to the delay in seeking appropriate medical care. There is an urgent need to educate the rural population about the hazards and proper first aid for snakebites. Ready availability and appropriate use of antsnake venom, close monitoring of patients, and timely institution of ventilatory support help in reducing the mortality(3). Randomised controlled trials are needed to investigate regarding rationale use of antivenom treatment(4). Considering the magnitude of this rural emergency and the cost involved, a National programme for this issue is needed and research in region specific monovalent antsnake venom production should be encouraged.

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