MOONFLOWER POISONING

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Poisoning in children is quite a common cause of admission to hospital in Johannesburg.[1] Between 1953 and 1955, 4% of all admissions to the Transvaal Memorial Hospital for Children were due to poisoning.[1] Only 18 out of 527 patients, however, were poisoned by plants, 12 of the 18 cases being due to *Datura stramonium* (stinkblaar).[2]

While stinkblaar poisoning is well known, no documented case of moonflower (*Datura arborea* L and *Datura cornigera* Hook) poisoning could be found. The following case is, therefore, described because the plant concerned is an unusual one, and it appears to be the first reported instance of moonflower poisoning in South Africa.

CASE REPORT

History

At 4.30 p.m. on 26 November 1958,* a boy of 6 years 9 months of age, who had been in good health, was noticed by his mother to have a red face. During the afternoon he had been playing on the verandah near a plant known as moonflower, and many of the leaves of the plant were scattered around the verandah. He was in the habit of mashing up leaves of various types to play 'medicines and doctors', but has stated that he never ate any of the 'medicines'. His mother gave him a 'sugar-ball' to suck and it is likely that he removed this from his mouth from time to time to watch the changing colours. It was 15 - 20 minutes after giving him the 'sugar-ball' that his mother noticed his red face, but she had been absent during this time. She took him for a short walk to a neighbouring house, and during the walk he complained of a dry mouth and said he felt giddy and could not see. He asked for water and appeared very excited. He became panic-stricken about his sight and then found he could not walk. At 5.20 p.m. he vomited (the clear water he had drunk), then for a short while went to sleep, but was thrashing around in his sleep. His whole body became scarlet, his voice was incoherent, and his speech was slurred; the wildly excited behaviour continued and became worse. His bowels had worked normally and his micturition was normal.

He was unlikely to have eaten any plant material and, although the fruit trees had been sprayed with 'pesthion' just a day before, he had not been near them. His cupboards had been sprayed with DDT the previous day.

Examination

At 7 p.m. he was seen by one of us (D.J.G.-S.) and found to have a generalized erythema. He was markedly restless, so much so that it was almost impossible to examine him. His pupils were widely dilated. Phenobarbitone, ¾ gr., was given by intramuscular injection. At 8.15 p.m., when seen by J.G. it was still extremely difficult to examine him because of his wild restlessness, and it required both his parents and one of the doctors to hold him down before he could be approached with torch and stethoscope.

The child had a generalized erythema and his pupils were widely dilated and fixed. At times he appeared to respond to questions with a mumbling slurred speech, but on the whole appeared semicomatose. He had a tachycardia but was apyrexial, and was picking at the bed clothes as though hallucinated. There was no neck stiffness or loss of power, and his lungs appeared normal, as did his throat, ears and abdomen.

The diagnosis of poisoning was made. The clinical picture was that of atropine poisoning. A further ¾ gr. of phenobarbitone was administered and he was admitted to hospital. While he was being admitted an attempt was made to identify the plant with whose leaves he had been playing, and it was apparently identical with that described by Van der Spuy[3] as *Datura cornigera* Hook.

Progress and Treatment

His stomach was washed out and no vegetable matter was returned. Lumbar puncture revealed a clear CSF with 3 lymphocytes and 25 mg. per 100 ml. of protein. 'Prostigmin', ¾ ml., was given by intramuscular injection and repeated 4-hourly until morning. The patient took fluids well despite his excited state, and later (at midnight) semicomatose condition. Fourteen hours after admission he appeared rational and well, and his erythematous rash had faded. His pupils were still moderately dilated, although they were now reacting sluggishly to light, and the patient had some difficulty with accommodation for 3 - 4 days. In spite of this, he was able to read his comics by the second day.

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DISCUSSION

Although this appears to be the first time that a case of moonflower poisoning has been reported in South Africa, many gardens in Johannesburg contain this lovely-looking plant and it does seem fairly widely known to be poisonous. In the country districts there is a belief that rubbing a plate with the juice of the moonflower leaf and serving a meal on it will bring death to the recipient.[4] However, there do not seem to be any known deaths in South Africa from consumption of this plant. In this case it is likely that the dose the patient ingested was very small and that if a large amount of the plant had been consumed a fatal outcome might have ensued.

It is interesting to note that in Cuba the giant ant keeps away from the neighbourhood of *Datura arborea* and it does not attack this plant.[5]

Watt states that there is apparently some confusion about the botanical identity of the moonflower in Johannesburg. It may be either *Datura cornigera* Hook or *Datura arborea* L, but if the botanical evidence is non-specific it is most likely to be *Datura cornigera* Hook.[5] The plant contains a mixture of the alkaloids atropine and hyoscyamine, described under the name of daturine.[5] The lay press gave considerable publicity[6] to this case at the time of its occurrence, and it does seem advisable that parents should realize that this plant is dangerous.

SUMMARY

A case of poisoning in childhood due to an unusual plant (*Datura arborea* L or *Datura cornigera* Hook) is described. This appears to be the first time that moonflower poisoning has been reported in South Africa.

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REFERENCES

1. Friedlander, F., Drubin, R. and Veitch, M. (1956): Med. Proc., **2**, 615.
2. *Idem* (1956): *Ibid.*, **2**, 575.
3. Van der Spuy, U. (1954): *Ornamental Shrubs and Trees for Gardens in Southern Africa*. Cape Town: Juta.
4. Kerr, I.: Personal communication.
5. Watt, J. M. and Breyer-Brandwijk, M. G.: *The Medicinal and Poisonous Plants of Southern and Eastern Africa*, 2nd ed. (In the press.)
6. *The Star*, Johannesburg, 28 November 1958.