

Seed of distress

by Walter Simpson

A hide-and-seek game provided the clue to the strange disorder threatening the girl's life

The history I received from one of our staff paediatricians was scanty, at best.

An 11-year-old girl was being referred to him from an outlying country. She was in respiratory distress, and her condition was deteriorating.

He asked me to assess the situation when she arrived in our emergency department, then call him back.

The girl arrived at 3 am, and it was clear that she was critically ill. She was in marked respiratory distress, with tachypnea, cyanosis, and pulmonary oedema.

She was lethargic, diaphoretic, and pale. Except for tachypnea, however, her vital signs were normal, and she was afebrile.

My brief physical exam revealed no evidence of trauma. Her extremities responded to painful stimuli.

I found pinpoint nonreactive pupils, distant heart sounds without murmur or gallop, bilateral rales throughout the entire lung fields, and possible upper-abdominal pain.

After she was intubated and an IV started, and while lab tests were being conducted, I talked to her father, a farmer. He told me nothing of significance.

His daughter had no history of trauma or recent or past illnesses of importance. She was not on medication and to his knowledge had not been exposed to any toxic chemicals, nor had she overdosed.



A normally healthy 11-year-old, who only six to eight hours before had been playing happily with her friends, was now in serious danger.

We went over the progression of her illness again. She had developed vomiting, diarrhoea, and abdominal pain early in the evening. This was followed by increasing weakness and respiratory distress that had progressed to its present state.

Meanwhile, the intern on duty was gathering further information from other family members. He said they hadn't offered any clues, but he did mention being told that the previous day the patient and a friend had been playing in a shed, climbing on and hiding behind some bags of seed.

Suddenly, it all came together — poisoning from seeds treated with an insecticide, with the poison absorbed through the skin. The symptoms were classic.

I had seen organophosphate poisoning in adults before, although nothing to match the severity of this case. With this new and vital bit of history, the child was immediately given 0.5 mg of atropine IV and repeated boluses until her eyes began to dilate.

The results were dramatic. Within 60 to 90 minutes she was extubated — actually she extubated herself.

When transferred to an intensive-care room, she was talking though still confused.

Her lab tests were returned a little later and showed a blood sugar in excess of 500 mg/dl without ketosis. I was concerned that perhaps we were not dealing with a single etiology.

However, a quick review of the textbooks showed this to be an occasional occurrence with organophosphate poisoning.

The nicotinic effects of acetylcholine accumulation at sympathetic ganglia cause intense stimulation of the adrenal medulla.

Still later, lab tests of the child's blood revealed high levels of anticholinesterase activity and organophosphate: her clothes also were contaminated with organophosphate.

She received a total of more than 10 mg of atropine over the next 24 hours and was discharged four days later in good condition with a normal blood-sugar level. □