cervical spine radiography prior to intubation. When radiographic resources can only provide films of limited diagnostic power, and the clinical setting demands rapid intervention, resuscitation must proceed with in line cervical spine stabilization.

The maintenance of the airway in all patients with head injury is well known to be a vital first aid measure. It is probable that in flight difficulties with airway management during initial transfer resulted in relative hypercapnia, exacerbating the trauma related increase in intracranial pressure[6], suggested by the history of a deteriorating conscious level and dilated left pupil. Prompt intervention with intubation and hyperventilation rapidly improved the clinical picture. We speculate that rapid normalization of the left pupil following airway control indicates reduction in brain oedema.

The Triservice Anaesthetic Apparatus[3] was modified to incorporate a single Oxford Miniature Vaporiser[7] factory calibrated to deliver isoflurane.

It is concluded that early neurosurgical intervention is possible in forward field dressing stations and we stress the importance of airway maintenance in such cases. Early correction of hypercapnia is probably crucial to outcome. Although the eventual outcome was disappointing there is no doubt that the history and physical signs justified early craniotomy.

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Chronic nutmeg psychosis

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The nutmeg tree (Myristica fragrans Houtt. Family Myristricacease) is found in the East Indies. The dried fruit yields the spice nutmeg. The first documented case of poisoning was in 1576 and used as a hallucinogen since the Crusades[1].

In the more recent literature there have been several reports of acute psychosis caused by nutmeg[2]. However to date there have been no reported cases of chronic nutmeg abuse and its sequelae. Here we report such a case.

Case report

A 25-year-old Caucasian man of no fixed address, was admitted into hospital on a Section 136 of the Mental Health Act. He was dirty, dishevelled and very disturbed. He was unable to give a history, at that time he was overtly psychotic, showing thought disorder, perseveration of speech and appeared to be responding intermittently to auditory hallucinations. He thought he was about to die. He required antipsychotic medication (haloperidol). All routine blood tests were normal and urine drug screen was negative. Brain scan was normal.

It was discovered that his mental state fluctuated with his ingestion of large quantities of nutmeg, two to six packets at a time (120-650 mg). After taking this amount of nutmeg he would become agitated, disruptive, complain of 'uncomfortable feelings' in his head, a sense of impending death, dry tongue polydipsia and vomiting. Even though he was given large amounts of antipsychotic he remained intermittently agitated.

He was also noted to be polydipsic, often drinking up to five litres of fluid per hour. On at least one occasion he drank his own urine. Blood chemistry confirmed water overload hyponatraemia (plasma sodium 115 mmol/l, urine osmolality 50 mmol/l; plasma osmolality 242 mmol/l). After a nutmeg binge these periods of polydipsia would last 1 or 2 days if water was not restricted. At one point he suffered a grand mal seizure probably related to water overload.

More history was obtained from his mother, whom he had not seen for 10 years. His parents had divorced when he was 5 years old, his father was a heavy drinker, violent with a possible mental illness. He was a 'loner' as a child, and worked for Customs and Excise after leaving school aged 16 years. His mother and sister noted a personality change about then and it was at this time that he started abusing nutmeg. The family lost touch with him soon afterwards. He had been admitted briefly to hospital on two occasions in the past. On both occasions he responded to an antipsychotic but nutmeg abuse was noted during his second admission.

His personal hygiene was always very poor, he responded to a behavioural programme and antipsychotic medication slowly. He continued to binge on nutmeg bought for him by other patients. He was never nutmeg free for more than 2 weeks.

Discussion

The mind altering experience (a high) is usually achieved by the ingestion of 5-15 g of nutmeg (one to three whole nutmegs or two teaspoons of grated nutmeg)[7]. Toxic overdose can be seen with as little as 5 g[4].

The effect starts within 6 h of ingestion. Overdose resembles an anticholinergic episode, with cutaneous flushing, tachycardia, decreased salivation, fever and CNS excitation. Classically nutmeg produces a miosis rather than a mydriasis but this is an unreliable sign[8]. Shock, coma and death have been reported in severe cases[9,10] but usually complete recovery occurs within 24 h, treatment is mainly supportive.

Although myristicin is one of the major components[11], it is still unclear if it is the psychoactive element of nutmeg. Synthetic myristicin does not always produce hallucination[12]. The structural similarities of the metabolized components of nutmeg to amphetamine-like compounds could be partly responsible for the activity of nutmeg[13].

This case is complicated by the possible underlying mental illness. As nutmeg is so readily available repeated toxic states have lead to episodes of polydipsia. The prognosis is poor for this man, with little motivation to control his

abuse of nutmeg even while under close supervision. He awaited a place in a behavioural unit.

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