a pre-nursing course for one year. Her first child was born when she was 17. She married a soldier, but the marriage only lasted one year, and her second child, a boy, was born then. She worked over a long period as a taxi driver. She lived with her parents until 1980 and was drinking heavily. She had frequent contacts with the local hospital and attended various clinics, including ENT and gynaecology clinics. In 1980 she was admitted to a hospital in Blackpool following an overdose of alcohol and drugs. In November 1980 she was admitted to Lancaster Moor Hospital with a history of amnesia. Since 1980, when she left home, she has had numerous admissions to hospitals in Preston, Bolton, Leeds, Bradford, Chester, Rochdale and Manchester. She has used various names and had numerous investigations for her amnesia and fits. These include several EEGs, CAT scans, X-rays, blood tests, and lumbar punctures. These have shown no abnormality except for raised liver enzyme levels on some occasions. She is also known to have had five convictions, and was in Risley Remand Centre as recently as April 1984. At the time of her admission she was still on probation.

On admission to our unit, mental state examination revealed that her affect was bland and she appeared unconcerned about her memory loss. Formal testing of her short-term and long-term memory showed them intact. However she continued to maintain that she did not know her name or any of her personal details, except the odd titbit, e.g. she could remember being in a car accident, and that she had been divorced. There was no other cognitive defect or other evidence of mental illness. The nursing staff observed her to have some 'fits' — some of which appeared genuine, and at times she bit her tongue and was incontinent. On 24 October 1984 she presented the nursing staff with a sample of apparently blood-stained urine which she claimed to have voided. No physical cause of haematuria was found. On 19 November 1984 she went to the hospital's Casualty Department, giving a fellow patient's address. She complained of chest pain and an ECG was performed. She was on the point of being admitted to a medical ward, when she was discovered.

She was discharged on 19 December 1984 to a probation hostel in Liverpool. A few days later, on New Year's Eve, she again presented herself to the Casualty Department complaining of chest pains and haemoptysis. She was admitted to a medical ward with a suspected pulmonary embolus and heparin therapy commenced. When her identity was discovered a few days later she was discharged.

Comment

This case shows many of the typical features of a Munchausen syndrome (Enoch & Trethowan, 1979). The patient appears to be in an early phase of her career as a hospital addict; the best documented case so far being McIlroy (Pallis & Bamji, 1979). Although Munchausen Syndrome cases usually present with physical complaints, 'psychological' Munchausen Syndrome cases do exist as shown by feigned bereavements (Cremona-Barbaro, 1983). This case shows the co-existence of physical and psychological symptoms. The only physical abnormality found in this case were the raised liver enzyme levels. These findings are difficult to explain, but could be related to liver damage due to her past alcohol abuse, a recent bout of heavy drinking, or a paracetamol overdose such as she has taken in the past.

Management of Munchausen syndrome cases is extremely difficult, as it depends on the patient's motivation, which is usually concerned with more 'treatment' — they seek the mode of cure rather than the cure itself. It has been suggested that local casualty departments should be informed of such cases to aid in their detection. One possible solution is the setting up of a register, and with modern technology it would be relatively simple to keep a national database of such cases on a micro-computer.

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Ephedrine Psychosis Rediscovered

The use of ephedrine for medicinal purposes dates back over 5000 years, when native Chinese physicians first used a herb, Ma Huang, which contained the active alkaloid. Ephedrine was extracted from

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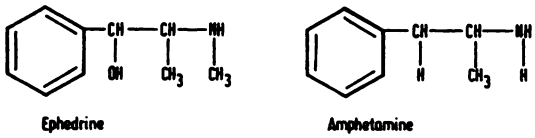


FIG. 1 Chemical structure of ephedrine and amphetamine.

Ma Huang in the late 1800s, but was considered too toxic for clinical use; it was rediscovered by Chen & Schmidt (1930), who demonstrated its sympathomimetic action and introduced it into Western medicine, where it was found to be a big improvement on adrenaline in the treatment of asthma. That the structure of ephedrine is very similar to that of amphetamine is not a coincidence, since Alles (1933) synthesised the latter as a synthetic substitute for ephedrine.

Herridge & A'Brook (1968) described two cases of ephedrine psychosis, stating that "so far as we can discover there have been no previous reports of psychosis following abuse of ephedrine." However, according to Otto & Nause (1980), "the appearance of psychoses following abuse of ephedrine has been known since the end of the 1930s and repeatedly described in the German literature in the 1940s. We report here a paranoid psychosis following increased use of ephedrine.

Case report

A 59-year-old single night watchman was brought to the casualty department by the police after entering a woman's flat uninvited. He had no history of psychiatric illness, alcoholism, or drug abuse, but had a long history of chronic asthma, for which he had taken ephedrine for 25 years; his personality was considered schizoid. There was no family history of psychiatric illness. Over the previous 2 weeks he had been working excessive overtime and had been concerned regarding recent thefts at his place of work. He was worried that he would be unable to apprehend trespassers because of his asthma and so doubled his ephedrine intake to 360 mg daily; this was taken as ephedrine hydrochloride plus 'Bronchipax' (ephedrine resinate 30 mg, theophylline 40 mg and salicyclamide 250 mg). Within 24 hours of this increase, he began to experience auditory hallucinations in the form of a woman's cries, and believed that a woman was being tortured in the flat below him. He made tape recordings of these cries and took them to the police, who did not believe him. He therefore took matters into his own hands and decided to search the flat for himself, alarming the female occupant, who called the police.

He was taken to the casualty department where he was seen by a psychiatrist and admitted under a compulsory order to a psychiatric ward. He described a 2-week history of auditory hallucinations and delusions, presenting in a setting of clear consciousness without mood disturbance. On admission, the dose of ephedrine was reduced to 60 mg. Ten days later, the patient was apparently symptom-free and was discharged, but he had been denying symptoms, and was in fact still experiencing auditory hallucinations. However, all psychotic symptoms disappeared 3 days later, and the patient gained full insight. He retrospectively described Schneiderian first-rank symptoms of thoughts spoken aloud and voices commenting on his actions and discussing him, which he had also been concealing from the staff during the psychotic episode.

Discussion

Psychosis associated with ephedrine use has been reported in a number of countries and there have been 20 case reports with adequate details. The reference to these cases are available on application to the authors.

Their ages range between 19 and 65 years. Ten were male and ten female. In only two cases was there a previous history of psychiatric illness: one patient suffered from 'neurasthenia' and another from panic attacks and hyperventilation. Only two patients had a family history of psychiatric illness, both their fathers being alcoholic. Three patients were considered to have an abnormal premorbid personality: one schizoid, one asthenic, and one obsessional. The most common reason for taking ephedrine was asthma, accounting for 60% of cases, although two asthmatics increased the dose for its stimulant effect. Two patients were drug abusers who had previously taken morphine, amphetamine and LSD, although not prior to the psychotic episode. Three patients took ephedrine purely for its stimulant effect, although they had not abused other drugs. Other reasons for taking ephedrine included hypotension, neurasthenia, and anxiety state with hyperventilation attacks where the patient believed that she was suffering from asthma. The length of consumption of ephedrine varied from 3 days to 25 years, with 80% of the patients having taken ephedrine for at least a year. In the majority of cases, the dose of ephedrine was gradually increased. The daily dose of ephedrine prior to the psychotic episode varied from 125 mg to 2500 mg, the average being 510 mg.

The main clinical features of the 20 cases are listed in Table I. The typical clinical picture is a paranoid psychosis with delusions and auditory hallucinations, in a setting of clear consciousness. This is very similar to amphetamine psychosis, with 45% of the patients experiencing visual hallucinations—a similar figure to the 50% in the report of amphetamine psychoses by Connell (1958). Clouding of consciousness was described in three patients and has also been noted in a minority of cases of amphetamine psychosis

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TABLE I
Clinical features of patients with ephedrine psychosis (n = 20)

Clinical feature	*%*
Delusions	100
Persecutory delusions	55
Delusions of reference	10
Delusions of grandeur	10
Delusions of jealousy	10
Hypochondriacal delusions	10
Religious delusions	5
Auditory hallucinations	90
Visual hallucinations	45
Tactile hallucinations	15
Olfactory hallucinations	5
Schneiderian first rank symptoms	35
Clear consciousness	85
Affective disturbance	30
Insomnia	55
Agitation	55
Suicide attempt	15

(Ellinwood, 1969). Many patients had more than one episode of ephedrine psychosis, and one experienced recurrent episodes over a 10-year period. Two patients remained psychotic despite abstinence from ephedrine, and two developed chronic defect states.

In its typical presentation, ephedrine psychosis raises some theoretical problems regarding the nosology of 'symptomatic schizophrenia'. This was discussed in 1959 by Slater in his review of Connell's monograph on amphetamine psychosis: "It is a matter of much theoretical interest how closely a pseudo-schizophrenic symptomatic psychosis may resemble the true endogenous schizophrenia . . . It seems probable that with adequate attention to specific tests, a much larger number of patients would have shown evidence of some degree of clouding of consciousness". It was thought at that time that a toxic psychosis would manifest as an acute confusional state. Apart from Kendell's work (1975) and Davidson & Bagley's (1969) paper on schizophrenia-like psychoses further discussion of the nosology of 'symptomatic schizophrenia' seems to have been swept aside in the English speaking world by the advent of the American DSM classification with its atheoretical basis. However, the appearance of ephedrine psychosis in the 1930s in Germany led to a solution being proposed in 1956, with Wieck's description of the '*Durchgangs-Syndrom*' (translated as: 'passageway' and indicating a transitory state). This was based on Bonhoeffer's ideas of the non-specificity of psychiatric symptoms (Scheid, 1962), and described a reversible organic state, without clouding of consciousness and no 'obligatory' symptom or psychopathological picture, except its transient nature and organic aetiology. It has proved to be a clinically useful concept in Germany, renewing interest in the reversible functional syndrome as a medical rather than an existential diagnostic problem. Certainly, the patient described here could retrospectively give a detailed account of his illness, indicating no clouding of consciousness, and thus representing a classical '*Durchgangs-Syndrom*'.

Ephedrine is no longer widely used as a bronchodilator, as the more specific beta$_2$ stimulants are now favoured; however, it is available without prescription and is a powerful psychostimulant. Martin *et al* (1971) compared the following drugs, administered subcutaneously under double-blind conditions: d-amphetamine, methamphetamine, ephedrine, phenmetrazine, and methylphenidate; ephedrine was found to be capable of producing the subjective and physiological effects of the other stimulants studied. Ephedrine has been marketed in the USA as 'the new legal cocaine substitute' under the name of Ma Huang Incense (Siegel, 1980). In recent years, certain 'garage laboratories' in the USA have also been manufacturing what have become known as 'look alikes'; which closely resemble amphetamine tablets in size, colour, numbering and trademark, but they contain non-controlled drugs such as ephedrine, phenylpropanolamine, and caffeine. These drugs, also known as 'pseudo-speed', are advertised quite legally in magazines and are inexpensive. Dougherty (1982) found that most of the 13 to 25-year-old drug abusers he interviewed in New York said that pseudo-speed gave them a 'rush' that was not quite as good as cocaine but sufficient to produce an adequate 'buzz', particularly when combined with alcohol; after alcohol and cannabis, pseudo-speed was the most commonly abused drug by adolescents in central New York. Young people who abuse pseudo-speed are commonly seen in emergency departments with adverse effects; e.g. one 20-year-old male was admitted one hour later with a subarachnoid haemorrhage (Wooten *et al*, 1983).

In 1965, Chapple claimed that ephedrine was being abused by young people in this country. There have been no further reports of abuse of ephedrine in the British literature, but it may nevertheless be occurring in the UK and pharmacists are aware that young people purchase ephedrine for its psychostimulant properties. In view of ephedrine's psychostimulant effects and its ability to induce paranoid psychosis, there seems to be a strong case for making it available only on prescription.

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Delusion Parasitosis: Successful Non-pharmacological Treatment of a Folie-à-deux

Delusional parasitosis, originally described by Ekbom in 1938, is an illness in which the individual believes small animals such as insects, lice, vermin, or maggots are living in or thriving on his/her skin. The delusion is not secondary to another psychiatric illness, and in general the personality remains otherwise preserved. Munro (1980) classifies delusional parasitosis as a subtype of monosymptomatic hypochondriacal psychosis, and has shown that a substantial proportion of patients with MHP respond to pimozide. Prior to the introduction of that drug, the prognosis of the condition was held to be very poor.

In delusional parasitosis, *folie-à-deux* is relatively common; Skott (1978) found that 25% of her patients were involved in a *folie-à-deux*. Berrios (1985) points out that very little is known of the natural history of the illness, and suggests that the prognosis may not be as bad as is currently believed, since the evidence has generally come from the very severe and chronic cases which only come to a psychiatrist 'in extremis'. The following *folie-à-deux* of delusional infestation is reported because, as far as the author is aware, it is unique, in that remission occurred in both partners without pharmacological

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