ance. Complete resolution occurs in four to 10 days.⁵ In a very small number of patients, where resolution is delayed, 100% oxygen may be given to reduce the partial pressure of tissue nitrogen and increase the gradient for reabsorption.^{3,5}

Many other complications have been described in relation to consumption of amphetamines or their derivatives. These complications, sometimes fatal, include fulminant hyperthermia, convulsions, disseminated intravascular coagulopathy, rhabdomyolysis, and acute renal failure.⁶

This is the first reported case of isolated retropharyngeal/cervical emphysema attributed to abuse of amphetamines. Fortunately this complication appears to be benign. More

experience is required if a rather conservative approach to its investigation and management is to be adopted.

I thank Mr Stoker for his invaluable advice, and Mr Meleagros under whose care this patient was managed.

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An unusual cause of hiccups

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Abstract

A case of persistent hiccup associated with cavitating pulmonary tuberculosis is reported. Though tuberculosis presenting with hiccup is rare, tuberculosis is again on the increase and clinicians should remain alert to the possibility of this diagnosis.

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Key terms: hiccup; pulmonary tuberculosis

Case report

A 52 year old unemployed plasterer presented to an accident and emergency department with a five day history of hiccups. He complained of weight loss, haemoptysis, and night sweats. He was a cigarette smoker of 35 years, intermittently abused alcohol, and had been exposed to tuberculosis as a young adult. There was a past medical history of vagotomy and pyloroplasty at the age of 24 years and transthoracic vagotomy at the age of 30 years for peptic ulcer disease.

On examination he was hiccuping, hoarse, emaciated, and pyrexial (37.5°C). Clinical examination of the chest revealed left upper lobe collapse but was otherwise normal.

A chest x ray showed emphysema, elevation of the left diaphragm, and irregular cavitating opacities in the left upper lobe with hilar lymphadenopathy (figure). The patient was admitted for further investigation with a provisional diagnosis of carcinoma of the lung.

There was a normochromic normocytic anaemia (Hb 10.8 g/dl), raised erythrocyte sedimentation rate (24 mm per hour), and raised alkaline phosphatase (171 U/litre; normal range 45-140 U/litre). Sputum was positive for acid- and alcohol-fast bacilli, identified

as *Mycobacterium tuberculosis*. Bronchoscopy showed no evidence of a carcinoma.

Two days after admission he was started on rifampicin 120 mg, isoniazid 50 mg, and pyrazinamide 300 mg four times daily, with ethambutol 1 g daily. Chlorpromazine 25 mg three times daily was prescribed on admission to control the hiccups, which stopped three days later. He was discharged after four weeks of inpatient care and is currently under review.

Discussion

Persistent hiccup lasting more than 48 hours is uncommon, and tuberculosis presenting as hiccup is rare.¹ The incidence of tuberculosis is again increasing. In Scotland there were 2033 cases reported in 1965, followed by a steady decline to 425 cases in 1987. By 1993 reported cases had increased to 460.²

Hiccough is an involuntary forceful inspiration, with poorly understood pathophysiology. A reflex arc has been proposed with the phrenic nerves, vagi, and T6-12 sympathetic fibres as the afferent limb.³ The "hiccup centre" is thought to be located in either the brainstem respiratory centre or the cervical cord between segments C3 and C5.⁴ The efferent limb is the phrenic nerve.⁵ Whether hiccup has a purpose is unclear. Hiccups are common in utero and may be a primitive reflex to prevent amniotic fluid aspiration⁶ or to prepare the respiratory muscles for breathing after delivery.^{7,8} Some investigators have suggested that hiccups may have no physiological function.⁹

Most episodes of hiccup associated with acute gastric distention and alcohol ingestion are short lived and resolve spontaneously. Chronic hiccup is defined as an attack lasting longer than 48 hours.¹⁰ Such episodes may be

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Chest radiograph showing emphysema, elevation of the left diaphragm, and irregular cavitating opacities in the left upper lobe with hilar lymphadenopathy.

associated with serious underlying pathology and require further investigation.¹⁰ Common

aetiological factors in chronic hiccup are diseases of the central nervous system, for example brainstem neoplasms,¹¹ metabolic disturbances such as uraemia,¹² abdominal causes, for example gastric cancer, and thoracic tumours.³ In this patient, it is proposed that irritation of the afferent limb of the hiccup reflex by upper lobe lung pathology from tuberculosis resulted in persistent hiccup.

It is important that any patient presenting with chronic hiccup should not be dismissed but thoroughly investigated to identify any underlying pathological cause. Only a few cases of tuberculosis presenting with hiccup have been reported but it is important to remember that the incidence of tuberculosis is again increasing and clinicians should remain alert to the possibility of pulmonary tuberculosis.

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