wheezing." Since then he had had many such attacks, some of which continued into typical asthmatic attacks, and he distinguished these quite clearly from his typical attacks of asthma which began with wheezing and in which there were few obvious symptoms of anxiety. The distinction between the two types of attacks had not previously been made by his doctors. Treatment directed towards relieving his anxiety by dealing with certain family problems together with instruction in relaxation led to complete relief quite quickly, and he returned to work.

Case (2). A male plasterer aged 28 was referred by Dr Joy Edelman of Barking Hospital in 1988. She had noticed that his asthma had persisted despite increasing doses of steroids, and that he could change from being completely free of wheezing one minute to having a wheeze quite audible without the stethoscope the next. She noted that the wheeze was always localised in the large airways, with good-quality breath sounds throughout the rest of the lung fields. He also complained of a sensation of a lump in the throat. In my interview with him he described how the lump in the throat appeared in only *some* of his episodes of breathlessness, and in these he experienced tingling in his fingers and around his mouth. These were evidently episodes of panic-over breathing, with incipient tetany. He had himself learnt that in these attacks he could relieve his symptoms by calming himself down. (The production of a wheeze in the large airways by compression of the chest by the voluntary muscles in asthmatics was described by Dekker & Groen (1957)).

In Case (2) Dr Edelman had thus made the distinction between the two types of attacks of breathlessness based on physical signs, and I had made it based on symptoms. Both methods are obviously useful.

Treatment of these patients depends on a careful assessment of the pathogenesis of the symptoms and this requires considerable attention to the detail of the history and physical signs. Where hyperventilation is important simple relaxation, concentrating on the chest, can be done very simply. In most patients a combination of specific anti-asthmatic treatment and treatment directed at the anxiety is probably necessary, and asthmatics are the ideal patients for collaborative management by physician and psychiatrist as first described by Maimonides in the 12th century (see Muntner, 1963).

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Malignant hyperpyrexia syndrome in combined treatment

SIR: We are writing to add another report to that of Brennan *et al* (*Journal,* April 1988, **152,** 578–579) in which a fatal malignant hyperpyrexia was associated with the combined medication of L-tryptophan, lithium, and phenelzine. This appears particularly important in view of the fact that both the aetiological and the pathogenetic factors involved in the neuroleptic malignant syndrome (NMS) are still ill understood (Henderson & Wooten, 1981; Gribb, 1988).

Case report. At the time of her death, this 48-year-old woman had been treated for depression since June 1986. Various treatment regimes, including dothiepin (225 mg *nocte*), mianserin (90 mg/day), flupenthixol (1 mg/day) and ECT (8 sessions), were administered unsuccessfully. In October 1986, she started on phenelzine (up to 60 mg/day) for four weeks, changing to tranylcypramine (10 mg b.d.) for the following six weeks. Both of which made no improvement to her condition, and were abandoned. Her mental state gradually showed evidence of more pronounced agitational symptoms, as well as obsessional and phobic traits. In November 1987 she took an overdose of tricyclic antidepressants, tranquillisers, and paracetamol.

In February 1988 she was started on chlorpromazine (up to 325 mg/day) and trazodone (100 mg t.d.s.), and a month later lithium and L-tryptophan were added (800 mg *nocte* and 3 gm/day respectively). This combination of drugs appeared to have made the first noticeable change in her depressed and agitated state, so that trazodone could be discontinued by April 1988. After four months it was decided to increase the chlorpromazine to 600 mg daily and on 21 July 1988 she was started on phenelzine (45 mg/day); other medication at the time remained unchanged, with lithium (800 mg *nocte*) and L-tryptophan (6 mg/day). Improvement of her symptoms allowed a reduction of the neuroleptic medication to 300 mg daily over four weeks, beginning in mid-July 1988. At that time the patient was well enough to go on a holiday to her sister's. During the journey she began to feel unwell and presented at a casualty department 36 hours later, having been found lying on the floor in an incontinent state. On admission she was incoherent in her speech, with marked reduction of her consciousness. Temperature was 38.8°C initially; muscular rigidity with cog-wheel phenomenon, as well as nystagmus, hyperreflexia and upgoing plantars, were present.

A tentative diagnosis of NMS was made and procyclidine (10 mg) was given. Blood samples for urea and electrolytes, full blood and differential count, blood cultures, MSU and lithium levels as well as random blood sugar proved normal. A CXR was clear and the CSF showed no cells or protein. Creatinine kinase was elevated at 408 IU. Within one hour of admission her temperature reached 42°C, at which point prophylactic antibiotics were started via a CVP line inserted in the meantime. Respiratory and cardiac arrest ensued shortly afterwards, and despite pacing and resuscitatory measures for over one hour, the patient died on 27 August 1988.

Post-mortem examination was essentially unremarkable, apart from a small haemorrhagic collection in the right pleural cavity and pulmonary oedema, which were attributed to resuscitation efforts and acute cardiac failure respectively.

Although this patient had been on neuroleptic therapy for six months, this had recently been reduced; the timing of the hyperpyrexia points more to it being an effect of her combined phenelzine, lithium, and L-tryptophan treatment. The effect of this is to increase brain 5-hydroxytryptamine, which has been demonstrated in animals to be associated with malignant hyperpyrexia (Grahame-Smith, 1970). We think that this and the previously reported case indicate the need for great caution when using 5-HT agonists, and that the particular combination of medication used here may be especially dangerous.

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A HUNDRED YEARS AGO

Medico-Psychological Association.

The following are the questions put to candidates at the recent examination held at Bethlem Hospital for the certificate in Psychological Medicine:-

MPC Examination

I What treatment should you employ to procure sleep in – 1. Acute delirious mania? 2. Acute melancholia? 3. Acute mania? 4. Simple melancholia? 5. The acute stage of general paralysis?

II What are the post-mortem appearances in the brain of patients dying – (a) In an attack of acute insanity? (b) After chronic insanity? (c) After general paralysis?

III What are the chief points to be noted in the diagnosis of general paralysis? What other disorders may simulate it?

IV What is the connection between insanity and epilepsy? How would the presence of the latter affect the diagnosis, prognosis, and treatment of the former?

V What is the duty of medical men as to recommending or discountenancing the marriage of a person who has had symptoms of insanity, or in whose family insanity exists?

VI When consulted about patients who have recently become insane, for which cases should you recommend an asylum and for which treatment in a private house?

Reference

Lancet, 5 January 1889, 56.

Researched by Henry Rollin, Emeritus Consultant Psychiatrist, Horton Hospital, Surrey