Alcohol and caffeine together

Combined effects of alcohol and caffeine on sleep.

Because of their opposing actions and different half lives, alcohol and caffeine taken together can produce particularly pronounced insomnia in the early hours of the morning. Alcohol's immediate sedative effect may reverse the alerting effects of caffeine. By about 0300 or 0400 the alcohol will have been metabolised; this will cause a rebound increase in cortical arousal that will now add to the alerting effects of the caffeine, which is only half metabolised by this time.

The photograph is reproduced with permission of Ulrike Preuss.

The table of caffeine contents has been adapted from Dews PB, ed. *Caffeine*. Berlin:Springer, 1984:61, and the records of oxyhaemoglobin saturation are reproduced from Issa FG, Sullivan CE. Alcohol, snoring and sleep apnoea. *J Neurol Neurosurg Psychiatry* 1982;45:353-9, with permission.

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The ABC of Sleep Disorders has been edited by Professor C M Shapiro, Department of Psychiatry, University of Toronto, Canada.

Lesson of the Week

Foreign body aspiration: a hazard of metered dose inhalers

V S Taskar, B B Bradley, H M Moussali, A M Hilton

Metered dose inhalers should be carried with their safety caps on to prevent foreign bodies entering them and being propelled into the bronchial tree when they are discharged

Metered dose inhalers have a well established role in the management of bronchial asthma.¹ If inhalers are carried in bags or pockets without their safety caps on foreign bodies may enter their mechanism and be expelled forcefully into the bronchial tree.² The ensuing symptoms are often difficult to distinguish from those of an acute attack of asthma. We describe two cases of accidental aspiration of a foreign body after use of a metered dose inhaler.

Case reports

CASE 1

A 24 year old woman who had had well controlled asthma since childhood developed acute chest tightness and wheeze. She took her salbutamol inhaler from her pocket and used it. She then felt a choking sensation with increasing wheeze, tightness, and cough and rushed to the nearest accident and emergency department. She was 13 weeks pregnant, and her asthmatic attack was attributed to her pregnancy. She was treated with nebulised salbutamol, which relieved the symptoms, and was reassured and asked to attend the general medical unit of her hospital for follow up.

She developed recurrent exacerbations of her asthma and regular use of salbutamol ipratropium inhalers and high doses of inhaled steroids were prescribed. After her delivery the symptoms did not decrease and a maintenance dose of oral prednisolone, 12.5 mg/day, was also prescribed. Despite this she continued to wheeze daily and thought that her inhalers were of no benefit.

Almost a year after presenting to the accident and emergency department she was referred to our chest unit for observation and treatment. On arrival she complained of cough with purulent sputum, haemoptysis, and pain in the right side of the chest in addition to her asthmatic symptoms. A chest radiograph was normal, but a ventilation-perfusion lung scan showed a matched defect in the right lower lobe. *Staphylococcus aureus* was isolated from her sputum but she failed to respond to antibiotics, so a fiberoptic bronchoscopy

was performed. This showed a conical hard object lodged firmly in her right intermediate bronchus, granular tissue, and purulent secretions. A valve cap from a car tyre (13 mm long) was removed at rigid bronchoscopy. Her peak flow rates, which had improved from 200 to 350 l/min with nebulised bronchodilators, increased to 450 l/min, and her oral steroids were reduced. The time between her accident and the correct diagnosis was one year.

CASE 2

A 20 year old woman with mild asthma requiring intermittent inhalation of salbutamol developed acute chest tightness. She took out her inhaler, which was in her pocket without its safety cap on, and used it. She immediately choked, coughed, and felt that she had swallowed something. A one penny coin was recovered from her stools two days later.

Discussion

Aspiration of a foreign body during use of an inhaler has been infrequently reported since the first report in 1981.^{2,5} Small objects like pennies, tablets, and screw caps can easily lodge in the mouthpiece of a metered dose inhaler and, when the inhaler is used, be forcefully expelled into the pharynx or larynx and inhaled into the bronchial tree. The importance of replacing caps on the mouthpieces of inhalers to prevent this must be emphasised. In both the reported cases the patients stated that they had inhaled or ingested a foreign body. In case 1 the similarity of the symptoms to those of an acute asthmatic attack and the fact that a nebulised bronchodilator resolved the acute event were misleading. The patient's persistent and frequent respiratory tract infections and the inadequate control of her unstable asthma with maximal treatment could, however, have suggested the presence of a foreign body. Such a possibility should be considered in all patients with unstable asthma that is difficult to control with conventional treatment. In case 2 the symptoms resolved rapidly and the patient did not require further

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treatment. Doctors should take a careful history and be aware of this problem in the regular follow up of patients using metered dose inhalers long term.

Careful instruction in the use of metered dose inhalers is an essential part of educating asthmatic patients. Patients should take a slow sustained inhalation when using their inhalers rather than a rapid deep breath as this may reduce the likelihood of inhaling a foreign body so deeply. Dry powder devices such as Diskhalers and, particularly, Turbohalers are possibly less likely to accept foreign bodies because of the fairly small sizes of their mouthpieces. Nevertheless, in view of the risks of inhaling a foreign body an inhaler's

safety cap should always be replaced when it is not in use.

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- 4 Wiesel JM, Bar ZG, Feinmesser R. Intrabronchial tablets—jet propelled. A case report. *J Laryngol Otol* 1981;95:219-20.
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OBITUARY

N J Brown

N J BROWN
FRCP, FRCPATH

Norman Brown was an outstanding morbid anatomist whose special experience and skills were in stillbirths and paediatrics. This was recognised in his election as a member of the British Paediatric Association. He was also one of six founder members of the Paediatric Pathology Society.

At Southmead Hospital his opinion was highly regarded, particularly in meetings on perinatal deaths. His monthly clinicopathological conferences, held in the evenings, were well attended by both senior and junior colleagues, who regarded them as excellent postgraduate education. The atmosphere at them was always friendly as Norman's clinical experience had taught him the difficulties of bedside diagnosis. His interest in teaching was also shown in his chairmanship of the education committee in Southmead and by the care taken in training his juniors. His fascinating presidential address to Bristol Medico-Chirurgical Society recorded his experience of performing 16 800 necropsies, many of them for the coroner.

Norman had a quiet, dry wit. His interests were gardening and playing the French horn in the Southmead orchestra and in a wind quintet. He and his wife, Enid, had four children and eight grandchildren. He died suddenly from coronary disease while in New Zealand visiting one of his former trainees.—H G MATHER

Norman John Brown, a consultant pathologist to Southmead Hospital in Bristol 1951-83 and to Bristol Royal Hospital for Sick Children and Bristol Maternity Hospital 1971-83, died 12 December. Born 2 March 1918; educated Bristol Grammar School, Bristol University (MB, ChB 1941). Served in Royal Army Medical Corps in Middle East and Italy 1942-7. Registrar and lecturer in pathology at Bristol University 1947-51.

A B HAY
FRCOG

Andrew Bertram Hay was a skilful operator. Over the years he built up an outstanding service, which in many ways set a pioneering example of how to provide obstetric and gynaecological care to a scattered population living in a large area. He was an excellent teacher. He retired before the new maternity unit at Raigmore Hospital was built, but he had forged the links that eventually brought it into being.

Outwith medicine, in the 1960s he started and for several years supervised a youth club, familiarly known as "doc's club," in Inverness. It was one of the few facilities then to provide a healthy outlet for the

rising generation. He spent his retirement quietly, helping others, continuing his interest in gardening, and developing his interest in Gaelic. Although he had left Canada at the age of 8, he retained his Canadian citizenship. His wife, Isabell, died in 1987, and he is survived by his son, Andrew.—BRIAN MILNE

Andrew Bertram Hay, formerly a consultant obstetrician and gynaecologist at Raigmore Hospital, Inverness, 1946-78, died 2 November aged 79. Born Medicine Hat, Alberta, Canada, 4 September 1913; educated Aberdeen Grammar School, Aberdeen University (MB, ChB 1936). General practitioner in Alford, Aberdeenshire. Hall fellow and clinical tutor in obstetrics and gynaecology at Glasgow University. During war served in Royal Army Medical Corps.

W J W THOMAS
FFARCS

Wyn Thomas was happiest when giving anaesthesia and looking after the patients in the intensive care unit at Wrexham Maelor Hospital: he established a small unit when he was first appointed and then commissioned an eight bed facility on a new site. His enthusiasm and quiet but firm leadership inspired all those around him, and he was a keen teacher.

Wyn had many interests, particularly astronomy and astrophotography, for which he developed his own observatory. He was also interested in building and flying radio controlled model aircraft, painting, music, fly fishing, wildlife, and birds. Wyn had a lovely sense of humour. He died of cancer of the colon and is survived by his wife, three daughters, and a son.—A ELERI EDWARDS, G J ARTHURS

Wynford John Walters Thomas, a consultant anaesthetist at Wrexham Maelor Hospital since 1975, died 14 November. Born Burnley; educated King's Grammar School, Macclesfield, and King's College, London, and St George's Hospital (MB, BS 1967). Senior registrar at St George's Hospital.

R L CORLETT
MD, DPH

Richard Lovell Corlett spent most of his medical career in Worcestershire. His appointment as medical superintendent of a small hospital incorporated several roles in those early days, and the work was arduous and demanding. On retiring from the position of medical officer of health he was given the freedom of the borough of Halesowen.

Early in his career he became a freemason. He founded Swinford lodge in Worcestershire and eventu-

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