dominant fingers, or the sharp edge of the opened base injures the palmar aspect of the non-dominant fingers if the base is held too close to the unprotected edge.

Thus the dorsal aspects of the dominant fingers and the palmar aspects of the non-dominant fingers will be selectively at risk when opening a corned beef can, while injuries from other types of can are random.

Corned beef is almost uniformly sold in tapered, key opened cans, the design of which is over 100 years old. These cans were originally chosen for their robustness and easy opening. Although the inevitable expense of redesigning corned beef cans may result in higher prices and initial consumer resistance, the design of the can should be reviewed. The cost of the resulting morbidity from these injuries is difficult to quantify, but added to costs of treatment must be those of enforced absences from employment.

This study shows that corned beef cans cause a disproportionate number of injuries to the hands of their users and that such injuries are common.

Accident and Emergency Department, Queen Alexandra Hospital, Cosham, Hampshire

A W B CROCKETT, BM, DRCOG, senior house officer

Dementia and Mrs Thatcher

We have had the impression that psychogeriatric patients seem more prone to recall Margaret Thatcher correctly than has been the case for other prime ministers. We tested the hypothesis that in demented patients Mrs Thatcher would be recalled more easily than other prime ministers who had served a similar period in office and that she is now recalled more easily than the Queen.

Subjects and methods

A retrospective study was performed on consecutive admissions to the psychogeriatric wards of the Bethlem and Maudsley hospitals for the years 1961-2, 1968-9, and 1983-4. These correspond with the fourth and fifth years of the terms of office of Mr MacMillan, Mr Wilson, and Mrs Thatcher, respectively. Eligible patients were aged 65 and over and had a main diagnosis of organic dementia on admission.

The total score on either the Felix post questionnaire (for some patients in years 1983-4, scored out of 20) or the Gresham ward questionnaire (for all patients in the years 1961-2 and 1968-9 and for some in 1983-4, scored out of 43) was recorded. The responses to the question concerning the identity of the reigning monarch and current prime minister were recorded separately.

Results

Those subjects too severely demented to register any score on either questionnaire—that is, 0/20 or 0/43—or to allow the administration of the questionnaire were excluded. For the purposes of analysis this gave 43 patients from 1961 to 1962, 27 from 1968 to 1969, and 44 from 1983 to 1984. The mean age, cognitive score, and length of stay were compared with *t* tests and were not significantly different between groups. Two by two χ^2 tests showed no significant differences in the male to female ratios between years.

The average cognitive score of those patients who correctly recalled Queen Elizabeth II as the monarch were compared with *t* tests and were not significantly different between groups.

Two by two χ^2 tests compared correct and incorrect recall of the monarch and prime minister within each group (table). In 1961-2 the Queen was recalled more often than Mr Macmillan ($\chi^2=6.70$, *df*=1, *p*<0.01) and a similar trend was evident for Mr Wilson in 1968-9 ($\chi^2=2.7$, *df*=1, *p*=0.1). In 1983-4 Mrs Thatcher was recalled more often than the Queen ($\chi^2=6.56$, *df*=1, *p*<0.02). Mrs Thatcher was recalled more often than Mr Macmillan ($\chi^2=6.20$, *df*=1, *p*<0.02) and, although remembered more often than Mr Wilson ($\chi^2=1.89$, *df*=1), the result was not significant. No difference was observed in ease of recall between Mr Wilson and Mr Macmillan ($\chi^2=0.65$, *df*=1, NS).

From *t* tests the mean cognitive score for those recalling Mrs Thatcher was lower than for those who recalled Mr Wilson (*p*<0.05) or Mr Macmillan (NS) (table). None of these achieved significance, but the score for recall of Mrs Thatcher in 1983-4 was lower than that for the Queen in any of the three periods of study.

Total No of patients in each study group correctly and incorrectly recalling the Queen and prime minister

	1961-2	1968-9	1983-4
Queen:			
Know	27	18	15
Don't know	16	9	29
Mean (SD) cognitive score for correct responses	45.5 (19.9)	53.1 (22.8)	45.3 (21.5)
Prime minister:			
Know	15	12	27
Don't know	28	15	17
Mean (SD) cognitive score for correct responses	49.9 (18.3)	54.8 (25.6)	41.0 (22.1)

Comment

Over 23 years demented patients did not differ in the cognitive score required to recall Queen Elizabeth II. Of three prime ministers re-elected for second terms and spending over five years in office, only Mrs Thatcher entered into the consciousness of demented subjects to an extent that made her easier to recall than the Queen. We have also presented evidence indicating that the recall of Mrs Thatcher is possible at cognitive levels that hitherto precluded memory for the Prime Minister.

We can only say that somehow Mrs Thatcher has given an item of knowledge to demented patients that they would otherwise have lacked: she reaches those parts of the brain other prime ministers could not reach.

The Maudsley Hospital, Denmark Hill, London SE5

IAN J DEARY, MB, CHB, senior house officer

SIMON WESSELY, MA, MRCP, registrar

MICHAEL FARRELL, MRCP, registrar

Correspondence to: Dr Ian J Deary, Department of Psychology, University of Edinburgh, Edinburgh EH8 9JZ.

Carboxyhaemoglobin concentrations in smokers of sheesha and cigarettes in Saudi Arabia

Sheesha (figure) is a smoking device widely used in the Arabian peninsula to smoke jurak, which is a mixture of tobacco and fruit cooked to produce a dark coloured paste. Jurak may be burnt by an electrical device or more commonly by charcoal. Many sheesha smokers consider it to be less harmful to health than smoking cigarettes.

The adverse effects of smoking cigarettes are well known,¹ including those attributed to carbon monoxide.^{1,2} The carboxyhaemoglobin concentration in the blood has been shown to be a useful marker of absorption of tobacco smoke.³ We have conducted a detailed study on the estimated amounts of carboxyhaemoglobin saturation in sheesha or cigarette smokers relative to the number of sheeshas or cigarettes smoked a day.

Subjects, methods, and results

We studied 1832 healthy male volunteers from Saudi Arabia aged 16-73 years. The medical history and usual smoking habits of each participant

were determined in an oral interview. Each man was medically examined and provided a sample of venous blood between 7 30 and 10 30 pm. All subjects were required to smoke for 10-40 minutes before the blood samples

were taken. Carboxyhaemoglobin was measured using an IL 282 CO-Oximeter. Statistical analysis was restricted to lifelong non-smokers ($n=256$) and smokers who at the time of examination smoked cigarettes only ($n=601$) or sheeshas only ($n=975$). A smoker was defined as someone who usually smoked one sheesha or more or more than one cigarette a day.

The mean (SD) carboxyhaemoglobin concentrations of sheesha smokers (10.06 (2.50)%) were distinctly different from those of both cigarette smokers (6.47 (2.73)%) and non-smokers (1.60 (0.70)%). Among sheesha and cigarette smokers a linear relation was shown between the number of sheeshas ($r=0.84$, $p<0.001$) or cigarettes ($r=0.52$, $p<0.001$) smoked a day and amounts of carboxyhaemoglobin saturation, respectively.

Comment

This study showed that sheesha smokers have significantly higher carboxyhaemoglobin concentrations than those observed in cigarette smokers or non-smokers studied or those previously reported in pipe or cigar smokers.⁴ Thus sheesha smokers probably absorb more carbon monoxide than other habitual smokers as sheesha probably delivers far more carbon monoxide. This difference could be related to several factors, including the concentration of carbon monoxide in tobacco smoke, mode of smoking with reference to the frequency of puffing, depth of inhalation, and time elapsed since the last smoke. The degree of physical activity and the state of health of a smoker are also important.

Apart from the type and quantity of tobacco smoked, the main factor affecting delivery of carbon monoxide in the smoke is the method of smoking. Jurak burned in sheesha contributes to the high carboxyhaemoglobin concentration found in sheesha smokers, and more carbon monoxide is delivered during sheesha smoking because of the charcoal used to burn jurak, which may make more carbon monoxide in the smoke. Moreover, sheesha is usually smoked in the evening and results in the subject going to sleep; this will increase the half life of carboxyhaemoglobin to roughly four hours.⁵

Even intermittent exposure to carbon monoxide is thought to be harmful,⁶ and indeed was identified in the 1979 report of the American surgeon general as a possible critical factor in several conditions, including coronary heart disease, atherosclerosis and sudden death, chronic respiratory disease, and retardation of fetal growth.¹

Based on the data obtained in this study, the authors consider

FIG 1—Picture of sheesha by courtesy of Dr Sabbagh, Saudi Arabia.

FIG 2—Painting by Ingres, *Odalisque and Slave*, by courtesy of the Walters Art Gallery, Baltimore, USA.

sheesha smoking a habit hazardous to health, and sheesha smokers may be at a greater risk than cigarette smokers of developing diseases that are related to exposure to carbon monoxide.

We thank our colleagues in the departments of medicine and community medicine. The study was supported by grant No AR-4-22 from the Saudi Arabian National Centre for Science and Technology (SANCST).

- 1 Surgeon General. *Smoking and health: a report*. Washington, DC: Department of Health, Education, and Welfare, 1979. (DHEW publication No (PHS) 79-50066.)
- 2 Doll R, Peto R. Mortality in relation to smoking: 20 years observations on male British doctors. *Br Med J* 1976;iii:1525-36.
- 3 Wald NJ, Howard S, Smith PG, Baily A. Use of carboxyhaemoglobin levels to predict the development of diseases associated with cigarette smoking. *Thorax* 1975;30:133-40.

- 4 Wald NJ, Idle M, Boreham J, Baily A. Carbon monoxide in breath in relation to smoking and carboxyhaemoglobin levels. *Thorax* 1981;36:366-9.
- 5 Wald NJ, Howard S. Smoking, carbon monoxide and arterial disease. *Ann Occup Hyg* 1975;18:1-14.

College of Medicine and Allied Sciences, King Abdulaziz University, Jeddah, Saudi Arabia 21413

FOUAD M ZAHRAN, MD, FRCS, professor, department of otorhinolaryngology
M SALLEH M ARDAWI, MA, DPHIL, assistant professor, department of biochemistry

SAUD F AL-FAYEZ, MRCP, assistant professor, department of medicine

Correspondence and requests for reprints to: Dr M S M Ardawi, PO Box 516, Jeddah, Saudi Arabia 21412.

MATERIA NON MEDICA

Lasting the Loppet

The Muskoka Loppet is the best known of the cross country ski races—or loppets—in southern Ontario. It is run over a 35 kilometre course in the Muskoka area, which begins about 100 miles north of Toronto and extends through Algonquin Park. The country is particularly lovely with undulating heavily wooded areas interspersed with many lakes. The course runs from Port Sydney to Huntsville and attracts over a thousand entrants annually.

We arrived at the Community Centre in Port Sydney about 40 minutes before the start. The atmosphere was rather reminiscent of the waiting room before the Fellowship orals. Several different forms of preparation ranging from the psychiatric to pure lifemanship could be observed. Many of the veterans were drinking several glasses of water as prophylaxis against anticipated dehydration. One elderly gentleman sat on the ground in the lotus posture periodically applying his chin to his toes. The serious racers were easily distinguishable from the middle aged touring skiers by their skin tight suits of plastic like material. They bent over their racing skis, weighing only 500 grams a pair, and applied wax with small irons. The rubrics of waxing and an animated discussion of how to cope with possible freezing drizzle with red klister were daunting to the less initiated. Others sported more eccentric clothing: some wore breeches like streamlined Victorian golfers and others embroidered ethnic head gear. We started at 10 am—at a temperature of -6°C —with the drop of a flag, and about 1500 competitors set off across Mary Lake.

The first two kilometres were open and allowed the serious racers to get clear of the rank and file. We were gradually strung out over the next 15 kilometres to the first feeding station. I made the initial error, perhaps due to excessive parental zeal, of trying to keep up with my two elder sons, aged 10 and 12. This became increasingly difficult and one had a sense of raw discomfort subternally, which in turn prompted morbid thoughts of myocardial infarction and cardiac arrest. Would one's obituary in the *Lancet* read discreetly, "suddenly in his prime"? the *Annals of Internal Medicine* might demonstrate more candour with, "by his own fault if not exactly by his own hand." Would one be spared the posthumous computer printout in the *Canadian Medical Association Journal* so reminiscent of a racing form book with its details of breeding?

A welcome sight at 11 30 am was the first feeding station, in which we were fed on warm sweet fruit juice, orange slices, and chocolate. I released my two sons, who promptly disappeared over the horizon, and proceeded myself at a slower pace. The next 10 kilometres were particularly lovely winding through forests of dappled birch and with pines and spruce towering over the narrow trails like aisles in a mediaeval cathedral. Exhausted by the children I was fortunate to fall in with two pacemakers—both rather plump girls. The first had yellow skis and massive thighs clad in corduroy. The second had a complex series of pouches attached to her belt like pannier bags. For almost 15 kilometres they provided a steady pace and we reached the 25 kilometre station at 12 50 pm for more juice and chocolate. The conditions were almost

perfect at about -5°C with fresh powdered snow. Fortunately the predicted freezing drizzle did not materialise.

The last 10 kilometres included several steep downhill stretches. Perhaps owing to increased endorphin release there is a tendency to take excessive risks at this stage. The girl with yellow skis came unstuck on an early descent but the girl with panniers proved more durable. I myself fell at a long curving descent where I had broken a ski tip in 1984. The steepest descent was around 31 kilometres, shortly before the last feeding station. This was littered with fallen bodies, and several of the older competitors walked down. It proved to be the undoing of the pannier girl, and I skied on at my own pace

for the remainder of the course. The last three kilometres were over Peninsula Lake to Deerpark Lodge. A line of skiers was spaced out along the track marked out by plastic parking cones. By now one's legs were like rubber but most competitors were slightly euphoric. I crossed the finishing line at 2 30 pm and found that my sons had passed through half an hour before. The winning man was round in 1 hour 53 minutes with the first woman about 20 minutes behind.—J K MCCONNON, Ontario, Canada.

Hippocrates of Cos (460-377 BC), history's most celebrated and revered doctor, practised medicine without a magnetic resonance scanner, ultrasound scanning, x ray, electrocardiography, a sphygmomanometer, an otoscope, a stethoscope, a thermometer, anaesthesia, vaccines, chemotherapy, antibiotics, aspirin, an answering service, a "beeper", malpractice insurance, a specialty, an office, or a degree from one of the better medical schools; which almost causes one to wonder how he came to be celebrated and revered.—F K ALDRED, professor, Huntington, USA.