

notable exceptions, clinicians and, let us say, molecular oncologists are becoming more and more distant from one another, and with little common language. But surely two cultures are the last thing we want in biomedical sciences.

There are a few branches of medicine, some the concern of your own institutes, where specialised knowledge of some aspects of cellular and molecular biology will automatically be a part of the trade; obviously, for example, in cancer research, also in neurology and in paediatrics, where a knowledge of genetics will be needed, or in other specialties where immunity is important. But we must admit that for most specialised branches of medicine a knowledge of recent advances in biology is not of paramount importance. The nucleotide sequence of a cancer gene, for example, will not at present help anyone to help or treat a patient with cancer.

So when there is so much to learn to maintain a high professional standard why bother about basic biology? For a large proportion of clinicians we must admit that it will make very little difference. But the leaders of the profession, and especially the teachers, will be in serious trouble if they fail to acquire a knowledge of the new concepts in the basic sciences. In ten or 20 years' time medicine will be vastly different, not just because of computers and robots. Then it probably will be necessary to

know about terminal amino-acid sequences and stop codons and such like, because, who knows, you may need to write these into your prescriptions. And make no mistake, the young medical student coming through in these future years will have all this at his fingertips. Being ignorant of the new biology then would be like managing the treatment of an infectious disease without knowledge that bacteria and viruses exist. Moreover, the leaders of the profession, many of whom I hope will still emerge from the network of the Postgraduate Medical Federation, should be in important positions for influencing decisions on strategy and tactics in future medicine and medical research. In such influential positions a wide and up-to-date view of the scientific basis of medicine is required.

It is for this reason that I have always so much admired the Federation's series on the scientific basis of medicine. Looking back on this series over the years one sees now that it has covered much of the exciting new biology that I have been discussing and which is going to change our lives. Whatever the future holds for postgraduate education in medicine I hope that this type of education for doctors will be expanded and developed further. Meanwhile the series shows the vision and wisdom of the leaders in the federation. It is no accident that it began under Sir Francis Fraser, and it is a fitting tribute on which to close.

SHORT REPORTS

Beware the bay leaf

Two cases of unusual foreign body ingestion requiring endoscopic removal are presented.

Case reports

Case 1—A 77-year-old man with a history of pharyngeal pouch for several years suffered symptoms of fullness and persistent aching in the region of the pouch after eating the Moroccan dish tarjin. The pouch failed to empty, and two months later at endoscopy under general anaesthesia a bay leaf was removed. There was mild inflammation of the mucosa.

Case 2—A 61-year-old man was eating pâté and felt something stick in his throat. He thought this was metallic but no radio-opaque foreign body was seen on plain x-ray film. At endoscopy under general anaesthesia a bay leaf was found stuck in the hypopharynx.

Comment

The bay laurel (*Laurus nobilis*) is an evergreen shrub whose leaves were used in classical times to make wreaths for crowning the victorious. The leaves are 5-10 cm long with a wavy edge (figure), which may explain their tendency to adhere to the mucosa of the pharynx.



Leaves of the bay tree.

Bay leaves are commonly used as flavouring for puddings, stews, and other dishes. Tarjin, a popular Moroccan dish, is a stew that simmers all day over a very slow heat, the ingredients being left much to the cook's imagination. There is a meat constituent and a concentrated stock which contains plenty of butter, oil, and herbs, in which bay leaves usually abound. It should be served in a vessel of glazed earthenware.

In the first case a bay leaf remained unchanged for a long period within a pharyngeal pouch and caused mild symptoms of inflammation. The patient was reluctant to undergo operation, and so the foreign body was removed by endoscopy. Endoscopy also showed that there had been no malignant change in the mucosal lining. As the patient intended to return to Morocco he was advised to eat tarjin in the traditional manner, using fingers to dip the meat in the soup, and so avoiding further bay-leaf ingestion.

Conquerors have been crowned with laurel, perhaps leaving the vanquished to console themselves with soup flavoured with bay. Without care they may have not seen the end of their troubles.

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ENT Department, St Thomas's Hospital, London SE1
A N JOHNS, FRCS, senior registrar

Outbreak of botulism in Kenya after ingestion of white ants

Six cases of botulism, five of them fatal, occurred in Kenya in October 1979. The contaminated food was a collection of termites (order *Isoptera*), commonly known as white ants. These are considered a delicacy by several tribes in Kenya. They are collected as they emerge, en masse, from the soil to make their nuptial flights when suitable conditions of humidity and temperature prevail. They are rich in protein and fat and have been considered as an exploitable food source. All patients (five from the Luhya tribe, and one Luo) ate the white ants, either raw or fried, at a meal in Nairobi three days after they had been collected in Kakamega, 400 kilometres from Nairobi. Some of the ants had been eaten fresh by about 12 people in Kakamega, none of whom fell ill. The remaining ants were transported to Nairobi by one

of the patients (case 2) in a closed polyethylene bag. From the history (obtained from the patient in case 6) none of the patients had eaten any food other than the ants and staple unpreserved foods such as maize and vegetables.

Case reports

(1) A 29-year-old woman presented 36 hours after the meal of ants, having complained of blurred vision, dizziness, and abdominal cramps the previous day. She was drowsy, generally weak, but with normal vital signs. She soon required intubation and then artificial ventilation as her respiratory efforts were clinically considered inadequate for satisfactory pulmonary ventilation. In view of the possibility of poisoning gastric lavage was performed. Later that day she improved, became fully conscious, and breathed spontaneously for several hours. She then deteriorated again, becoming flaccid and areflexic with fixed, dilated pupils, but she was still able to move her fingers slightly on command. Laboratory investigation results were normal, including an electroencephalogram and serum cholinesterase concentrations. Botulism was suspected four days after admission. Supportive treatment was continued until she died 14 days after admission of bronchopneumonia, confirmed at necropsy.

(2) A 31-year-old man presented two days after the first patient. He had taken a second meal of the ants the previous day to prove to others that he had not added poisons to them. His illness followed a similar course to that in case 1 and 12 days after admission he also died of bronchopneumonia.

(3) A man presented in a moribund state two days after the meal of ants and died in the casualty department.

(4, 5) Two men, feeling unwell the day after the meal of ants, returned to their rural homes, where they soon died.

(6) The sixth patient was a man. He suffered only blurred vision for two weeks.

When botulism was suspected food samples were sought and the polyethylene bag, with some remaining ants, was obtained. Cultures from these grew *Clostridium botulinum*. Two groups of mice were fed on the ants, one group being protected by tetravalent antitoxin. The protected group survived. The unprotected group died, confirming botulism 10 days after the first patient was admitted. Facilities for detecting botulism toxin in patient samples were unavailable. Antitoxin was not given, because of the late presentation and diagnosis,¹ nor was guanidine, because of the severity of the paralysis.²

Comment

Botulism is an intoxication, the toxin being formed under anaerobic conditions in food containing living spores of *Ci botulinum*, an organism fairly widely distributed in soil. Meat products, home-canned vegetables, and fish are commonly responsible.³ This outbreak in Kenya was due to eating white ants, a common food source, after their storage in anaerobic conditions. Unrecognised outbreaks may be occurring in East Africa. There is a need for further epidemiological study.

¹ Cherington M. Botulism. *Arch Neurol* 1974;**30**:432-7.

² Cherington M, Ryan DW. Botulism and guanidine. *N Engl J Med* 1970;**278**:931-3.

³ Anonymous. Fish farms and botulism. *Br Med J* 1975;iii:106.

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Kenyatta National Hospital, University of Nairobi, Nairobi, Kenya
K W NIGHTINGALE, FFARCS, DTMH, lecturer in anaesthetics
E N AYIM, MD, professor of anaesthetics

Unusual cause of gnawing pain in the hand

A rare complication of a hand injury resulted from penetration of the deep tissues and the initially unsuspected presence of a large foreign body.

Case history

During a fiercely contested game of rugby football the patient, when vigorously fending off an opponent, injured his right fist, lacerating the skin over the dorsum of the third metacarpophalangeal joint. He played on. Later the tiny wound was cleaned and dressed in the local casualty department,

whence he was discharged. The wound healed, but over the next 17 months it repeatedly broke down to form a discharging sinus, a complication which was controlled with courses of antibiotics. Finally, he was referred to an orthopaedic clinic complaining of pain in the knuckle and recurring sinus formation. Examination then showed a stiff third metacarpophalangeal joint (which flexed from 5 to 45 degrees) and a small sinus in the centre of an area of erythema on the dorsal side of the joint. Cultures from the sinus grew



Radiograph of right metacarpophalangeal joints showing half an incisor tooth in head of third metacarpal bone. Inset: tooth after removal.

Staphylococcus aureus. A radiograph showed partial collapse of the head of the third metacarpal and a large sequestrum within it (figure). At exploratory operation half of an incisor tooth (figure inset) was removed from inside the head of the third metacarpal bone. Except for a small area of scale the tooth appeared healthy. After adequate excision the wound healed and, apart from residual stiffness in the joint, the patient had no more trouble.

Comment

Human biting injuries of the hand, whether deliberate or accidental, are common and teeth are often broken as a consequence. Many such injuries have been reviewed¹⁻⁴ and the metacarpophalangeal joints are often affected, usually as a result of a punch to the open jaw. Such injuries are sustained with metacarpophalangeal joints flexed. If the hand is examined with the joints extended the skin wound and the site of penetration of deeper structures are then at different levels. This probably explains why our patient's full injuries were not appreciated when he sustained them.

Although cellulitis, septic arthritis, osteomyelitis, compound fractures, and death from septicaemia are all described complications of such biting injuries, only osteomyelitis was an important problem in our case, and this settled with appropriate treatment. We can find no other report of a tooth not only deeply penetrating bone but actually breaking off and remaining there unsuspected. It should be emphasised that accurate clinical diagnosis of such an injury can be obtained only if the casualty surgeon examines the hand in the position in which it sustained the injury.

¹ Chuinard RG, D'Ambrosia RD. Human bite infections of the hand. *J Bone Joint Surg [Am]* 1977;**59**:416-8.

² Malinowski RW, Strate RG, Perry JF, Fischer RP. The management of human bite injuries of the hand. *J Trauma* 1979;**19**:655-9.