including those that could have been transmitted by the bite gave negative results. These investigations included a complement fixation test for Q fever, malarial fluorescent antibody tests, schistosomal and filarial complement fixation tests, the rapid plasma reagin test and Treponema pallidum haemagglutination test, and a search of blood for trypanosomes. Serum was then examined for an extended range of antibodies to West African viruses (ETWB). Antibodies against Le Dantec virus were found in significant titre (1:16). No other viral antibodies were detected.

Comment

The question of a causal relationship between the insect bite, the infection, and the subsequent Parkinsonism must remain problematic, but there can be little doubt that the febrile illness after the bite occurred when the Le Dantec virus infection was acquired, for the patient had never been to West Africa and had had no other incident so far as he could recall during which he had been bitten while on a ship that had been to West Africa. Many viruses can cause encephalitis, and involvement of the basal ganglia is well recognised in certain viral infections, particularly those with Japanese B, St Louis, and Murray Valley viruses. It is particularly notable, however, that in the International Catalogue of Arboviruses1 Le Dantec virus, on being inoculated into suckling mice, is reported to have produced "severe lesions of encephalitis with important destruction of the neurones of the cerebrum (corpus, thalamus, hypothalumus) less acute in the spinal cord. Perivascular cuffing with mononuclear cells. No myositis." In view of this there was probably a causal relationship between the bite with the infection it conveyed and the subsequent development of Parkinsonism.

The case is notable in focusing attention on the need for vigilance in containing viral infections that could be transmitted by insects carried on transport arriving from Africa. Secondly, it provides suggestive information that Le Dantec virus, like certain other viruses, is capable of damaging the basal ganglia of the brain.

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Cardiac arrhythmia after mushroom ingestion

Mushroom poisoning is relatively uncommon in Britain. Ingestion of the bulb agarics with their lethal "amanita toxins" account for most of the reported deaths but serious reactions may occur with other species, which contain a variety of toxins.1 We describe here the reaction that may follow ingestion of the edible black-spored mushroom Coprinus atramentarius (inky caps) and alcohol.

Case report

A 37-year-old man became ill after eating wild mushrooms which he and his wife had picked, fried, and eaten on the same day. Two hours after the meal the patient drank three pints of beer and almost immediately felt unwell. His face flushed, a botrych red rash appeared over the upper half of his body, and his hands and face swelled. He became breathless, sweated profusely, and was nauseated. During the three hours in which the reaction was severe he vomited six times.

The patient's medical history was unremarkable and he had never complained of palpitations. He had not taken any drugs. There was no family history of heart disease or thyrotoxicosis.

On admission his face was flushed and there was peripheral vasodilatation, but the swelling of his face and hands had settled. His temperature was 37·5 °C. He had an irregular pulse with a tachycardia of 120 beats/min. Blood pressure was 110/80 mm Hg. The heart sounds were normal with no audible cardiac murmurs. The remainder of the examination was normal. The admission electrocardiogram (ECG) showed sinus tachycardia with frequent supraventricular ectopic beats.

Twelve hours later the patient felt better but he was in atrial fibrillation with an apex beat of 150 beats/min. His ECG was monitored and he remained in atrial fibrillation for 60 hours before spontaneously reverting to sinus rhythm. The arrhythmias did not recur.

Full blood count; chest radiographs; and serum electrolyte, cardiac enzyme, and protein-bound iodine concentrations were normal. Serial ECGs confirmed the arrhythmias but were otherwise non-specific.

The patient's wife ate the same mushrooms without drinking alcohol and remained well. The mushrooms were identified as Coprinus atramentarius.

Comment

Toxic reactions after ingesting Coprinus atramentarius are uncommon. Features of the reaction which have been reported include flushing, swelling and rash of the face and hands, tachycardia, hypotension, dyspnoea, nausea, vomiting, and shock. While these effects are unpleasant, recovery, even from severe reactions, usually occurs spontaneously within 24 hours without complications.2

The reaction occurs only when alcohol is taken with or up to 24 hours after ingesting cooked mushrooms.1 Its intensity is directly related to the quantity of mushrooms and alcohol consumed and the time interval between the two events.

The effects are similar to those that occur when a patient taking disulfiram drinks alcohol. Simandl and Franc3 have reported isolating tetraethylthiuramdisulfide (disulfiram) from Coprinus atramentarius, although this has not been confirmed.

Markham has observed reversible ECG changes in most patients during controlled reactions,1 while cardiac arrhythmias and myocardial infarctions have been described with toxic interactions4 between disulfiram and alcohol.

Because of the similarity between the two reactions cardiac dysfunction may be expected to occur after the alcohol-mushroom reaction, but it has not been reported previously. In our patient the arrhythmias occurred during and for a short time after the reaction and were unlikely to have been coincidental. In a healthy man the effects were self-limiting but in patients with cardiovascular disease the consequences may be more serious. If several hours lapse between the ingestion of the mushrooms and consumption of alcohol the connexions between them may not be recognised and a possible cause of cardiac abnormality may be missed.

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Male dyspareunia due to short frenulum: an indication for adult circumcision

The main indications for adult circumcision are a prepuce that cannot be freely retracted behind the glans, fibrosis of the prepuce orifice, recurrent dermatitis of the prepuce, persistent or recurrent balanopropthesis, paraphimosis, or suspected carcinoma of the penis. Patients are also referred because of inadequate hygiene and because

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