Khat — a growing concern in the UK

The first symposium about khat held in the UK was attended by phytochemists, pharmacognosists, pharmacologists, mental health workers and members of organisations concerned with drug abuse. **Peter Houghton** reports

Considerable quantities of khat are now flown, almost daily, into the UK, where they are consumed by immigrants from Ethiopia and Somalia. Khat is the fresh, leafy twigs of *Catha edulis*, a plant originating from the horn of Africa. The leaves are chewed as a stimulant and are an important part of social life in Yemen, Ethiopia and Somalia. Khat contains a variety of chemical substances but its activity has been ascribed to compounds with chemical structure and pharmacology similar to the amphetamines, chiefly cathinone.

The Somali population in the UK is estimated to be as high as 90,000 and concerns over health and social problems associated with chewing khat have grown. Nasir Warfa, lecturer in transcultural psychiatry, Barts and the London, Queen Mary's School of Medicine and Dentistry, described the use of khat among UK Somalis. Many users are refugees with complex personal and social problems. A survey in 1983 showed that khat increased concentration and loquacity while being chewed but decreased sexual performance and caused anorexia, constipation and insomnia. More recent surveys have shown that khat use is associated with depression but it is difficult to say whether this is due to khat or to the social circumstances of its users. Episodes of severe psychosis can occur in khat chewers but it is not known whether this is a case of cause and effect. Mr Warfa thinks that excessive chewing may cause a temporary psychosis but rarely severe depression.

Axel Klein, project leader, Drugscope, described a project funded by the Economic and Social Science Research Council to examine the supply, distribution and use of khat. Of particular interest is the tension between adverse factors (eg, strain on finances, family relationships and health) and the beneficial aspects of khat use in increasing the sense of community among Somalis in the UK and providing income for African khat growers.

Chemistry, pharmacology and toxicology

Geoff Kite, phytochemist, Royal Botanic Gardens, Kew, described recent studies on alkaloids called cathedulins, which were present in khat plants studied in proportions as high as 0.5 per cent. Cathedulins are more resistant to decomposition than cathinone. Muna Ismail, PhD student, King's College, London, presented research showing that the cathedulins, as well as cathinone, were responsible for the ability of khat extracts to release dopamine from brain striatal tissue. This dopamine release is associated with a general stimulant effect.

Ken Broadley, professor of pharmacology, Welsh School of Pharmacy, Cardiff, gave a comprehensive account of the effects of

cathinone on the central and peripheral nervous system — it releases noradrenaline from sympathetic neurones and dopamine and serotonin from the brain. Tolerance develops with repeated use.

Studies in the Yemen show that the incidence of acute myocardial infarctions was 49 per cent higher in khat chewers than in non-chewers. However, no studies have been carried out in the UK to see if there is a similar association and, clearly, this is work which should be done, Professor Broadly said.

Regular khat use is associated with a rise in arterial blood pressure and pulse rate and this corresponds to the levels of cathinone in the plasma, which peak about five hours after chewing commences. Abdulla Gunaid, professor of medicine, Sana'a University, Yemen, said that over 40 khat strains are grown and used in Yemen. High cathinone content is associated with cultivation at high altitudes and such plants are generally more valued. Plant material is often contaminated with pesticides and this complicates toxicology studies.

Effects on mental health

Eleni Palazidou, consultant psychiatrist, St Clements Hospital, East London Mental Health Trust, observed that khat was a major issue in her dealings with Somali patients. Many of the young, male Somalis Dr Palazidou sees are refugees, traumatised from their experiences of torture and displacement. They turn to khat chewing as a reaction against their experiences. Although khat caused some central nervous system stimulation, Dr Palazidou noted that memory function and decision-making speed were often impaired and patients became agitated and depressed. The initial stimulation was followed, after three hours, by a depressive stage and, in heavy khat users, there could be profound lassitude and possibly paranoia after chewing is stopped.

Dr Palazidou pointed out that there are no good epidemiological studies on whether or not khat use causes deterioration in mental health but it had been shown that only two out of 16 psychotic patients who used khat had a previous history of illness. Furthermore, psychosis reappeared if khat was used after a period of abstinence. The situation in London is complicated because many khat users also smoke heavily and have a high alcohol intake.

The position of the World Health Organization on whether khat causes dependence is that moderate but persistent psychological dependence with demonstrable craving occurs, but physical dependence is less easy to demonstrate.

Effects on the gastrointestinal tract

Iain Murray-Lyon, gastroenterologist, The London Clinic, London, shared his experiences of the effect of khat on the gastrointestinal tract and voiced concerns over the adverse effects of long-term use. Regular chewers have bad gingivitis and lose teeth but there appears to be no unusual incidence of oral cancer. There is, however, a high incidence of oesophageal cancers in Yemen compared with gastric cancer among khat users, although the situation is reversed in the UK. Khat increases the half-life for stomach emptying and gut transit time. There also seems to be a high incidence of chronic liver disease and reduction in urine flow in khat users but it is not known how much is due to khat and how much to contamination with pesticides.

Regulation

Khat has attracted the attention of the Home Office in the UK. There is some controversy over whether it should be made illegal but the general consensus at the symposium was that a ban would cause more problems than it would solve. Education of the Somali community and other users in the UK about the health risks, backed up by projects and policies to improve social conditions, would be a more constructive approach. Ways of using the plant more safely, without destroying an important cultural feature of some of the ethnic minorities in British society are needed.

The symposium on khat was organised by Peter Houghton, professor of pharmacognosy, King's College, London, and took place at the college on 20 January