

Cocaine use: Disturbing signs

A form of cocaine use in which "coca paste" is smoked has recently made its way to the United States, according to a just-released monograph published by the National Institute on Drug Abuse in Rockville, Md. Because coca paste is highly concentrated and relatively inexpensive compared with other forms of cocaine, "it may maximize all the [cocaine-related] problems we've seen in the past," says the report's author, psychiatrist Ronald K. Siegel of the University of California at Los Angeles.

Cocaine is usually "snorted" and absorbed through the mucous membranes of the nose. In recent years, its chemical conversion to a more concentrated form known as "freebase," which is usually smoked, has greatly increased. Coca paste is also smoked, often in a tobacco or marijuana cigarette, but has traditionally been available only in South American countries, where it is processed into "street cocaine" for worldwide distribution.

"Coca paste is probably stronger than freebase," says Siegel. There is an epidemic of coca paste use in South American countries, he says, which has led to numerous psychiatric hospital admissions. These patients suffer from symptoms such as paranoia, excitability, hallucinations and delusions that in severe cases make up what is known as "cocaine psychosis."

Laboratories that process coca paste have sprung up in the United States, and several coca paste seizures by law enforcement officials have occurred over the last few years. Siegel located 45 coca paste users in three states and reports that most are either involved in drug trafficking or are undocumented aliens from South America. Coca paste use is currently limited to this segment of the population, "but this [overall pattern] is the same way freebase use started out in the 1970s," says Siegel.

Cocaine is easier and less expensive to make and distribute than "street cocaine," he adds; thus, it may reach a wider audience of users.

Another disturbing development, he points out, is a pattern of cocaine bingeing that has emerged in the United States since 1982. Rather than using the drug daily, some individuals take an entire week's supply during one or two binges lasting from 4 to 48 hours. When combined with the more concentrated cocaine doses now available, bingeing increases the risk of adverse reactions.

Concludes Siegel, "The history of coca and cocaine [use] has been a history of increasing doses, increasingly effective routes of administration and an increasing incidence of dependence and toxicity."

Uncharted outpatient illnesses

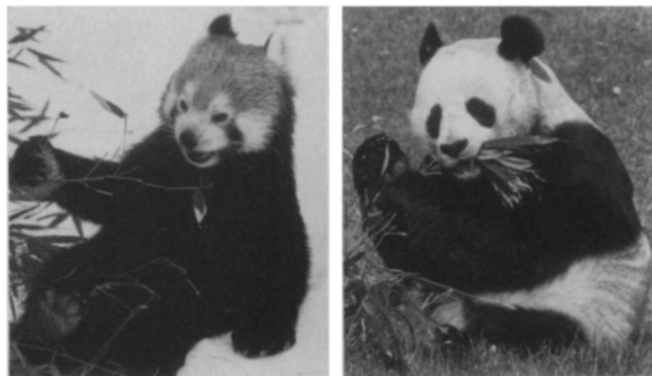
Hospitalized psychiatric patients have been found to have a surplus of medical problems, and there are now indications that the same is true for psychiatric patients well enough to leave the hospital.

Thomas P. Beresford of the Veterans Administration Medical Center in Memphis and his colleagues conducted standard laboratory tests on 205 patients in a psychiatric outpatient clinic. The patients, all men from poor to middle-income backgrounds, were stabilized and being treated for a variety of long-term psychiatric disorders, including depression and schizophrenia. Almost 28 percent of the sample required a medical referral, report the investigators in the September *PSYCHOSOMATICS*. Diagnosed illnesses included anemia, hypertension, urinary tract infections, diabetes and lung cancer.

The researchers suspect other groups of stabilized outpatients will show similar results on laboratory tests. It is not known whether physical illness rates are substantially higher among stable outpatients when compared with the general population, they point out, but the possible need for regular laboratory testing to pick up treatable medical illness in psychiatric outpatients "is a matter of significant clinical magnitude and deserves more attention."

Panda pedigree: Giant and lesser

Are they bears or raccoons or members of yet another family? The phylogeny of the giant panda and its smaller relative, the lesser or red panda, has puzzled biologists for a century. The giant panda looks like a bear with some unusual characteristics and behaviors. For example, it does not hibernate and, instead of roaring, it bleats. The giant and lesser pandas have been grouped together because they share characteristics of tooth structure, skull architecture, penis shape and fur color pattern. Now scientists at the National Zoological Park in Washington, D.C., and at the National Cancer Institute in Frederick, Md., have applied tools of molecular biology to the pandas. They have compared the chromosomes, the DNA sequences and two sets of protein characteristics, the size and charge and the antibody-binding properties. Stephen J. O'Brien and his colleagues have constructed "consensus phylogeny," indicating that the giant panda is a bear and the lesser panda is a raccoon.



Between 30 million and 50 million years ago, the progenitors of raccoons and bears split into two lineages, the scientists report. Soon the raccoon line divided further into the Old World raccoons (ancestors of the lesser panda) and New World raccoons (ancestors of the raccoon, coati, olingo and kinkajou). Meanwhile, in the bear lineage, about 20 million years ago the giant panda ancestors split from the main line. O'Brien and his colleagues comment in the Sept. 12 *NATURE*, "The lesser panda and giant panda clearly do not share a common ancestor after the [bear-raccoon] split, emphasizing that the morphological similarities of the pandas are probably the result of parallel retention of ancestral characters that may have been lost (for example, in the bear) after their divergence from the main line."

Drug company buys antibody firm

A small company that has been the leader in developing medical diagnostic tests using monoclonal antibodies has been purchased by a major drug company, Eli Lilly and Co. of Indianapolis, for more than \$300 million. Hybritech, Inc., a San Diego firm that is one of the most financially successful of the specialized biotechnology companies, produces and markets diagnostic tests for a variety of conditions including colon and prostate cancer, infertility, allergies and pregnancy (*SN*: 5/7/83, p. 296). The company is also exploring the use of monoclonal antibodies in therapy against infectious diseases. The acquisition, still subject to Hybritech stockholder approval, moves Lilly into the rapidly growing diagnostic business and bolsters its research efforts toward using monoclonal antibodies to treat certain cancers. Monoclonal antibodies are very pure antibodies that bind to a single specific target.

Hybritech recently received a setback when its broad patent on a monoclonal antibody method, widely used in making diagnostic and medical monitoring tests, was ruled to be invalid by a federal district court in San Francisco. Hybritech announced that it plans to appeal that decision.