

care of themselves. They are brain-damaged and it is irreversible."

The staff members caring for the patient make a collective decision to withhold nutrients when the time comes. "If even one

person feels it is not time, we do not withhold," Haemmerli declares. What about the consent of the family? That is a different matter. Haemmerli says he talks to the family but it is clear he does not have high

regard for consent. "Informed consent is something that is really only good for the physician. It is a matter of salesmanship. The physician can persuade the family to consent if he wants to. It is meaningless.

Opium-Free Poppy Under Study as Codeine Source

One of the less noted results of the 3-year Turkish opium ban that was lifted in 1974 has been enlivened interest on the part of the United States in a newly recognized poppy, *Papaver bracteatum*. This poppy does not contain opium. However, it does produce a substance from which codeine, the heavily used pain-killer and cough suppressant, can be processed. The U.S. Department of Agriculture (USDA) has a small but growing research project on the bracteatum. And the federal government's interagency Opium Policy Task Force, which is scheduled to report its findings to the President on 15 December, has been looking into the feasibility and desirability of domestic cultivation of the plant to reduce reliance on opium importation. The three U.S. drug companies licensed to process narcotics, alarmed by rising prices and the falling stockpiles of opium resulting from the ban, are also very interested in establishing a domestic source of codeine.

It was only in 1967 that an Iranian chemist discovered that the bracteatum, which grows wild in some parts of the Middle East, contains thebaine, which can be converted to codeine. The United Nations has since become very interested in the bracteatum as a potential substitute for the licitly grown opium poppy (*Papaver somniferum*). It has held annual conferences on the bracteatum since 1972, and for several years has done research on it at its narcotics laboratory in Geneva. Morphine, the base for heroin, cannot be obtained from thebaine except through a series of complicated and inefficient chemical processes, so the substance is thought to be immune from abuse by drug traffickers—particularly since there is no likelihood at present that illegal opium, which constitutes the vast bulk of opium grown and marketed worldwide, will be stamped out.

From the U.S. standpoint, a number of issues surround the question of whether to grow the bracteatum poppy, none of which has been fully resolved. Although the drug companies—Mallinckrodt, Merck and Co., and S. B. Penick and Co.—are interested in a degree of codeine self-sufficiency to buffer them from the vagaries and rising costs of doing business with foreign countries, the task force believes it is a mistake to equate codeine with oil: the country has a year's worth of emergency stocks of opium; there are substitutes for codeine that are effective, even though doctors prefer codeine; and, if worse comes to worse, the United States could plant its own crops of opium poppies.

The question of potential abuse and diversion of thebaine has been debated at length, and the task force has decided this does not pose a serious hazard. One task force member observes, however, that there is concern, in principle, about domestic production of a new substance that might let some unanticipated genie out of the bottle. After all, he says, remember when heroin was introduced in the early 1900's as a supposedly nonaddictive substitute for morphine. There already exists a family of thebaine-derived compounds that are highly potent (thebaine can also be obtained from the somniferum poppy), although their main use is for sedating large wild animals.

If the Administration should decide that bracteatum cultivation is economically desirable and necessary in view of the world supply and demand situation, there remains quite a big public relations problem, both internationally and domestically. No country is prohibited from growing poppies for home use, but now that the United States has decided to assume world leadership in the drug abuse problem, it might be impolitic, particularly since the United States has tried to discourage other countries from getting into the legal opium trade because of the difficulty of policing it. It would be a hard idea to sell domestically, too, says a task force person, because every time the idea is broached, someone like Jack Anderson will come out with a scary headline, such as, "Ford proposes growing narcotics in Arizona." It would take some education to create a differentiation in the public mind between somniferum and the non-opium-producing bracteatum.

If the United States did decide to sanction thebaine extraction—and the task force does not feel a decision is urgent—it would be several years before the first commercial crops could be harvested. It takes 3 years to produce mature plants from seed (the somniferum poppy takes only one), and there are considerable agronomic obstacles to be overcome. Currently more than a dozen countries around the world are doing research on the bracteatum, and none has succeeded yet in domesticating the plant. The three U.S. drug companies are cultivating experimental poppy patches, as is USDA, which, with a bracteatum budget of \$200,000 this year, is growing it in four states—Maryland, Oregon, Washington, and Arizona. The bracteatum favors growing conditions very similar to those favored by wheat, but as a foreign import the plant raises novel pest and weed control problems.

Although the drug companies are eagerly awaiting government sanction, it is unlikely at this point that anything short of a widespread analgesic shortage would bring swift government action. In the long run, however, the bracteatum might in many places be substituted for the somniferum. Morphine has largely been replaced by synthetics—in fact, 90 percent of legal opium is converted to codeine worldwide, as is 98 percent of the opium processed in the United States. But world demand for codeine continues to increase.

Although U.S. stockpiles of opium are still low, some believe this will prove to be temporary, as emphasis is shifted to the importation of poppy straw (dried poppy tops) from that of opium gum, which is extracted from fresh pods. India, currently the main opium supplier to the United States, still exports the gum because this harvesting method is more labor-intensive, but the shift worldwide is to poppy straw, which is harvested and processed by machines and therefore less subject to diversion and abuse. If restrictions on the importation of poppy straw are loosened (the United States at present can only buy it from Turkey) this country may choose continued reliance on the somniferum poppy rather than withdraw its business from needy Third Worlders and risk censure for growing its own narcotics.—C.H.