Letters

Acupuncture Anesthesia

I read the letter from Arthur Taub (6 Oct., p. 9) about acupuncture with mixed emotions. Although I am neither endorsing nor objecting to the National Institute of Health's "commitment" to study the use of acupuncture in surgical anesthesia and in the treatment of pain resulting from chronic diseases, I must speak out against some of Taub's misconceptions about, and attacks upon, acupuncture.

Acupuncture anesthesia is neither predicated on "an admixture of Yin and Yang" nor based on "the subjective sensation imparted to the examiner by the beat of the radial pulse at the wrist." The insertion of acupuncture needles is seldom as superficial as "1 to 2 millimeters beneath the skin"; in fact they very often go as deep as several centimeters (*1, 2*). In a Caesarian section the acupuncture needles go several inches into the abdominal wall. The statement that "no relation has been established between segments of the radial artery and the various internal organs" is ridiculous, because no needles are ever, or should ever be, inserted into any segments of the radial artery. When one looks at the chart used for identifying sites of needle insertions, it is obvious that any part of the vascular system is to be carefully avoided (*2*).

Taub's declaration that "evidence for acupuncture anesthesia . . . is generally reportage to the West from guests of the Chinese People's Republic who do not speak Chinese and who are visiting China for other purposes" is unjust. As the first Chinese-born physician to have visited the People's Republic of China in 22 years, I went in May 1972 without an official invitation and for no other purpose than to visit my family and to see firsthand what medicine is really like in the People's Republic of China. I witnessed several mitral commissurotomies and thyroidectomies performed under acupunctural anesthesia. While some patients received the usual doses of meperidine (50 to 75 mg) or morphine (8 to 10 mg) intramuscularly or subcutaneously *before* the operation, others received no premedications whatsoever. None ever "received intravenous narcotic analgesics during the procedure."

To declare that acupuncture is in no way "superior to a placebo in the treatment of chronic pain," or is merely a form of hypnosis, as others have suggested, completely loses sight of the fact that acupuncture has also been successfully used in the People's Republic of China in cats, horses, and mules. You can imagine how hard it is to give a placebo or use hypnosis on a mule.

To declare that something is impossible because it cannot be explained on a physiological or logical basis by our current state of knowledge is like saying that aspirin should not be used for relief of pain because the exact mechanism of how it works is not yet clearly understood.

TSUNG O. CHENG
Cardiac Catheterization Laboratory, George Washington University Medical Center, Washington, D.C. 20037

References

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2. ———, *Hospit. Med.*, in press.

Electric Power Research

The timely articles on energy which have appeared in *Science* (Research News, 8 Sept. 1972 through 12 Jan. 1973) clearly indicate the need for significantly expanded research and development (R & D) in this field. The electric utilities of the country, public and investor-owned, have joined to form the Electric Power Research Institute, incorporated on 23 March 1972, with the authority to carry out research and development on behalf of the entire industry. The institute is now in the process of initiating a research program, the cost of which will build up to an annual expenditure of about $100 million by next year.

The electric utility industry in the past has relied primarily on the equipment manufacturers to carry the research burden, but the manufacturers and utilities frequently have conflicting interests and objectives. Because the equipment manufacturers and other research organizations do have extensive R & D capabilities in specific areas, it is appropriate for the electric utility industry to continue to use contractors for a significant amount of research and development work. On the other hand, there are strong pressures and good reasons for the electric utility industry to acquire an independent research capability.

Experience in R & D is not a strong characteristic of the electric utilities, and a principal reason for establishing an electric research laboratory would be to attract (and keep) top R & D talent from outside the industry. Having its own research staff and facilities, the industry could plan a comprehensive R & D program based on broad systems analyses and technology assessments. The laboratory would also be responsible for technology transfer—engineering new developments which result from research conducted both in-house and by contract.

There are many ways in which such an industrywide scientific laboratory could be established. An interesting possibility would be to associate this laboratory with an outstanding technical research university such as M.I.T. or the California Institute of Technology. M.I.T. has demonstrated its competence to assemble an effective full-time R & D staff in its Lincoln and Draper Laboratories, while Caltech has had remarkable success with its Jet Propulsion Laboratory.

This type of operation would not only guarantee outstanding R & D personnel, but it would also ensure that the electric utilities' R & D program would be operated with great openness. The public has a real stake in this program, both from the point of view of national energy resources and of environmental protection. Apart from technical implications, the visibility and credibility of a major R & D laboratory operated by a technical university with an international reputation for research could provide the electric utility industry with a refreshingly new image.

HAROLD LURIE
New England Electric System, 20 Turnpike Road, Westborough, Massachusetts 01581