Correspondence

The Editorial Board will be pleased to receive and consider for publication correspondence containing information of interest to physicians or commenting on issues of the day. Letters ordinarily should not exceed 600 words, and must be typewritten, double-spaced and submitted in duplicate (the original typescript and one copy). Authors will be given an opportunity to review any substantial editing or abridgement before publication.

Anticholinergic Agents in Cicutoxin Poisoning

TO THE EDITOR: The recent article by Landers and co-workers[1] is an excellent toxicologic review of what is reputed to be the most poisonous plant in North America,[2] the water hemlock. As noted by the authors, previous publications have indicated that cicutoxin-induced seizure activity appears to result from an overstimulation of central cholinergic pathways.[3,4] Starreveld and Hope[4] suggested that perhaps an anticholinergic agent, such as atropine, might be of value in mitigating the convulsive effects of this plant. We have published the results of a study[5] which examined the possible use of anticholinergic agents in the treatment of *Cicuta douglasii* poisoning.

Our study utilized 35-day-old, C-1 mice which were placed, one each, in plastic boxes to avoid any effects of grouping. A dilute alcoholic extract was prepared from the root of verified *Cicuta douglasii.* Dose-effect data on seizure activity were collected using five doses (intraperitoneally) of ten mice per dose. Similar data were collected on mice that had been pretreated with benztropine and biperiden. We found no significant difference in the convulsive dose-50% (CD_{50}) between the control animals and those treated with the anticholinergic agents. In addition to this information, we collected data comparing the CD_{50} of control animals versus animals pretreated with physostigmine. This phase of the study was to examine the hypothesis that cholinergic stimulation would have an additive seizure-inducing effect with concomitantly administered cicutoxin by lowering the seizure threshold. As with the first phase of the study, no significant difference was noted between pretreated mice and controls. The final phase of the study compared control animals with those pretreated with diazepam. In contrast to the initial phases of the study, we found diazepam to significantly elevate the CD_{50} in mice ($P < .05$).

Our results suggest that the convulsive effects of water hemlock are neither reduced by the anticholinergic agents benztropine or biperiden nor increased by the use of the cholinergic agonist physostigmine. Use of diazepam, on the other hand, significantly reduces seizure activity, when compared with findings in controls. As suggested by Landers, and confirmed by our study, cicutoxin-induced seizures should be controlled with intravenous administration of diazepam. We hope that precious time and effort will not be wasted in the clinical setting attempting to utilize central anticholinergic agents in treating water hemlock poisoning.

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A Medicaid Success Story

TO THE EDITOR: Dr Boni's letter "Abolish Medi-Cal"[1] struck a responsive cord in me. We all have our private horror stories to tell about this "system for denying payment for . . . medical care." I would like to share with Dr Boni and other readers a success story involving that same system. This can perhaps give an answer to the question of how physicians in a "less affluent area" can provide care to poor patients through the current Medicaid system (Medi-Cal in California).

It is clear that the current system is a "two tier system"—in fact, if not in theory. The solution we have arrived at accepts this fact and relies upon a combination of Medi-Cal reimbursement and volunteered physician services to provide care to 2,000 or more patients on state aid.

Realizing that "If I continue to treat poor patients it will be at my own expense," many physicians had, in the past, simply refused to treat such patients or severely limited their practices. Medicaid patients had limited access to care and physicians who treated such patients had to pass on their losses to their private sector patients.

In 1983 a group of doctors in my locality organized a nonprofit clinic devoted exclusively to the care of Medi-Cal patients. No other form of reimbursement is accepted. Ordinary outpatient services are provided by nurse practitioners and physician's assistants under close supervision by volunteer physicians in a group practice next door. Patients requiring physician services are seen by a panel of volunteer physicians who staff "clinics" on their own time, free of charge. In serious emergencies, patients are sent to the hospital's emergency room next door. Another group of physi-