

THE CALIFORNIA JOURNAL OF EMERGENCY MEDICINE

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of Emergency Medicine

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President's Message

July 2000 will always be perhaps a special moment for CAL/AAEM. We are now moving forward with the first issue of our newsletter: the California Journal of Emergency Medicine. In less than two years and with only 200 California AAEM members, we have organized so far 3 successful widely-publicized Business Forums on critically important practice issues in emergency medicine (EM). We have supported emergency physicians (EPs) in their legal struggles for due process. We have recruited an impressive panel of EPs to our board of directors and to the leadership of almost every committee.

Perhaps our most important effort has been in our opposition to the "Corporatization of EM" by publicly held and hospital owned entities. We have targeted "Exit Strategies" as our most important priority due its critically damaging impact on the welfare of the majority of EPs. CAL/AAEM stood unequivocally united with the CMA, ACHP and our own AAEM in supporting nearly 40 EP groups in their struggle to stand against what we believe is a dangerous violation of the California laws prohibiting the corporate practice of medicine by non-physician entities. We are also actively progressing in our work with the State Medical Board to address the issue of moonlighting while emphasizing the value of board certification in EM as a requirement for the independent practice of EM. Our patients deserve nothing less.

I would like to dedicate the first issue of our newsletter and my first CAL/AAEM President's message to CAL/ACEP. As EPs, united, we must all express our gratitude to CAL/ACEP for its long-standing dedication and its achievements on a state and national level. We also wish to thank its members and its current past and current leadership for the outstanding services CAL/ACEP has provided to all EPs on nearly every front. You equally touch the lives of your members and non-members.

Many of our members and readers will next ask "Then why a second state organization?" Why not maintain a cohesive one-organization approach in California? Why even join CAL/AAEM?

Those are indeed most legitimate questions. A second "organized EM voice" in California certainly carries the risk of weakening our efforts. It could be labeled as "divisive" and demoralizing. Why not simply participate and contribute effectively to a more resourceful experienced organization? Furthermore, CAL/ACEP is actually an organization that has recently embraced our participation. In June 2000, its members have elected three of our AAEM leaders to its own board of directors. CAL/ACEP has enriched us with many of our own AAEM members who are dual in their affiliations, including 3 of its own past Presidents. Even the EMPAC Board has at least 3 of our own AAEM members.

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Welcome

Welcome to the first issue of *The California Journal of Emergency Medicine*. This journal is a quarterly journal dedicated to providing CAL-AAEM and other physicians up-to-date information on the practice of emergency medicine – both clinical and practical. Submissions are welcome and encouraged. It's your forum for communication!

Types of submissions include:

1. Viewpoint: Brief statement on a controversial topic (maximum 400 words).
2. Case Report
3. Review articles (maximum 1000 words)
4. Letter to the Editor: Response to published article
5. Original research

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Clinical Review

Phenobarbital for Alcohol Withdrawal: Rapid Patient Disposition

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For thousands of years, ethanol abuse continues to be a serious problem worldwide. Emergency physicians face the consequences of alcoholism. Chronic alcoholics often present to the emergency department with seizures, ketoacidosis, and symptoms of withdrawal. These patients require significant physician time, nursing, and medical resources. For sedation and reversal of withdrawal symptoms, benzodiazepines (BZDs) have most commonly been utilized in the (ED) and intensive care unit setting. Phenobarbital is an older drug that is perhaps currently underutilized for alcohol withdrawal. In this article I will discuss the advantages of phenobarbital over BZDs in the rapid disposition of chronic alcoholic patients.

The pharmacologic action of the diminutive ethanol molecule is complex. It is believed to increase the fluidity of the lipid bilayer of cell membranes within the central nervous system, resulting in alteration of membrane function from diminished viscosity. One example of this is the enhanced action of the inhibitory neurotransmitters GABA and glutamate at their respective receptors in the presence of ethanol. Ethanol also appears to affect opioid receptors, as well as many other membrane-bound enzymes and ion channels.

A variety of pharmacologic agents have been tried in the past for withdrawal. Besides BZDs and phenobarbital, other anticonvulsants, such as phenytoin, have been used with limited success. Phenytoin has little efficacy in the mitigation of withdrawal symptoms, and does

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Overcrowding (cont.)

3. Violence. Tempers flare and a few patients tend to become more agitated and violent in crowded conditions. Instances of violence have occurred in various ED waiting rooms over who is to be seen first, creating a hostile atmosphere. Bodily harm has occurred to both nursing staff and emergency physicians.
4. Lost "Golden Hour." Bad outcome have resulted from overcrowded conditions. Patients with subtle presentations of serious diseases such as MI, PE, rupturing aortic aneurysms, ectopic pregnancy, or stroke may miss the "golden hour" of effective treatment waiting on a gurney in the hallway. Additionally, patients with serious infections such as sepsis, pneumonia or meningitis may experience delays which result in bad outcome. I am aware of a patient who sat in an ER waiting room for four hours with Fournier's Gangrene, and as a result had a bad outcome. As physicians are seeing more complex and acutely ill patients, some feel they do not have adequate time to thoroughly evaluate each patient.
5. Ambulance diversions. Ambulance diversion has increased both in urban and suburban areas. The consequences of these diversions include significantly increased transport times, risk of traffic accidents en route, and potential for poor clinical outcome.
6. Increased errors in treatment. Feeling rushed and under time pressure results in errors and risk for malpractice or legal action. Decision errors have resulted from miscommunication during periods of overwhelming patient volume. With increasing numbers of patients, errors such as mislabeled specimens or drug dosing also increase in frequency.

The problem of overcrowding in EDs will not improve until hospitals invest money to improve service. EM physicians need to be active and vocal at the local, state, and national levels and demand legislation aimed at improving the overcrowding problem.

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Clinical Review (cont.)

appear to have a role in prevention of seizures from head injury in the alcoholic patient. Phenothiazines and butyrophenones are generally thought to increase risk of seizure in this subgroup, but no studies have demonstrated this specifically. These drugs appear to have little effect on the GABA receptor, and are rarely selected as first-line agents.

BZDs, which first appeared in the 1950s, are the most commonly used pharmacologic agents for alcohol withdrawal. These drugs are GABA receptor agonists which increase the frequency of chloride channel openings, and undergo hepatic metabolism exclusively. The half-life varies considerably between specific drugs, and depends on lipid solubility and activity of specific metabolites. Longer acting BZDs (half-life 20-80 hours) such as diazepam and chlordiazepoxide tend to be more lipid soluble and require less frequent dosing after discharge from the emergency department from auto-tapering. However, the lipid-soluble metabolites, such as nordiazepam, tend to accumulate over time. This may be a problem for patients with compromised hepatic function, which chronic alcoholics tend to have. The shorter acting agents (half-life 2-20 hours) such as lorazepam and triazolam are converted into water-soluble metabolites that are quickly excreted by the kidneys.

Phenobarbital, first synthesized in 1912, has been used in the past for alcohol withdrawal but has fallen out of favor, as BZDs have become more widely used and have a putative greater margin of safety. The exact mechanism of barbiturates is unclear, but it is known that barbiturates bind to the GABA receptor and increase the duration of chloride channel opening. This is in contrast to BZDs, which increase the frequency of openings. This may in part explain the need for more frequent dosing of BZDs compared to phenobarbital.⁽⁴⁾ Phenobarbital also enhances the activity of the microsomal ethanol oxidizing system, which aids in the metabolism of ethanol. The metabolites of phenobarbital are inactive, and the drug is eliminated very slowly by the liver. The half-life for phenobarbital can be up to 5 days, making it ideal for outpatient disposition from the emergency department. Patients presenting with uncomplicated alcohol withdrawal, with perhaps seizures and mild to moderate tremor, may be candidates for outpatient treatment and disposition. For clinicians selecting a BZD, it is often necessary to give multiple doses before adequate sedation is achieved. This requires more time and attention from the emergency physician in the reassessment of the situation. These patients may respond well to administration of BZDs in the ED and, because of the limited half-life, will require a prescription for more of the drug to prevent relapse. This places the burden of filling the prescription and taking the pills at the proper time intervals on the patient. Often this is too much responsibility for the chronic alcoholic.

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Landmark Trial Starts

By Howard Davis, MD, FAAEM, FACEP

June 30, 2000, marked an historic day for the specialty of Emergency Medicine. On that day, ACHP (Affiliated Community Healthcare Physicians) submitted its trial documents in the case of ACHP v. CHW (Catholic Healthcare West). With the support of the American Academy of Emergency Medicine, the California Medical Association, the California Society of Anesthesiologists, the California Radiology Society and the California Society of Pathologists, a group of practicing Emergency Physicians (EPs) and other Hospital Based Physicians has taken on a multibillion

dollar hospital corporation. The trial may last through the summer and into the fall.

For those unfamiliar with the case, a brief summary follows: In October of 1997 CHW announced the purchase of "the management arm" of EPMG (Emergency Physicians Medical Group). The purchase price was \$40 million and I believe most of this went to a handful of top shareholders. The working EPs in EPMG, many of whom received nothing from this purchase, were tied to this management arm (renamed "Meriten") by a thirty-year contract which provided a thirty-

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Clinical Review (cont.)

Phenobarbital loading obviates the need for prescriptions or further patient compliance with regard to taking medication. Often one dose of parenteral phenobarbital will result in adequate sedation, thus allowing the emergency physician to attend to other duties. The long half-life of phenobarbital makes a discharge prescription unnecessary, with the same benefits of a BZDs such as GABA agonism and seizure prophylaxis. The drug is also quite inexpensive compared to some of the newer BZDs. In their study of phenobarbital for alcohol withdrawal, Young and colleagues administered a loading dose of 260 mg IV followed by 130 mg increments every 30 minutes until sedation was achieved.⁽⁶⁾ Their mean loading dose was 598 mg IV, and 96% of patients showed improvement with minimal side effects and no further convulsions.

References

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(Trial cont.)

year stream of profits to Meriten, a for-profit subsidiary now wholly owned by CHW. Many EPs throughout the system felt that this arrangement was in effect a kickback, and that EPMG now enjoyed a competitive advantage in the CHW marketplace by virtue of paying this kickback in return for their hospital contracts. These "non-EPMG" EPs protested the deal vociferously, were largely ignored, and thus chose to organize themselves into ACHP to stop the deal.

Grounds for the lawsuit include violations of California's bar against the Corporate Practice of Medicine, unfair business practices, and fee-splitting. A separate lawsuit, filed by James Severance MD, an EP who lost his contract at CHW/St. Joseph's Hospital in Phoenix, alleges additional federal racketeering violations. Led by the CMA and AAEM, hospital based physician organizations throughout the state have lined up behind ACHP in the form of an amicus curiae (friend of the court) brief filed and accepted by the court in May. It appears that much of the California physician community has found common cause with ACHP's fight against the exploitation of physicians.

REMINDER

AAEM Scientific Assembly
Orlando, Florida
February 22 – 25, 2001
Request days off from the ED schedule now!