

ful appeal. Second, the medical situation has not changed, except that more time has been lost that should have been used to continue discussion with the woman directly. And finally, the physician has now helped transform himself or herself into an agent of the state's authority.

It is not helpful to use the law to convert a woman's and society's moral responsibility to her fetus into the woman's legal responsibility alone.^{1,8} The best chance we have to protect fetuses is through enhancing the status of all women by fostering reasonable pay for the work they do, providing equal employment opportunities and adequate day care, providing a reasonable social safety net, and ensuring all pregnant women access to high-quality prenatal services.¹ After birth, the fetus becomes a child and can thereafter be treated in its own right. Before birth, we can obtain access to the fetus only through its mother, and in the absence of her informed consent, can do so only by treating her as a fetal container, a nonperson without rights to bodily integrity.

Even from a strictly utilitarian perspective, this marriage of the state and medicine is likely to harm more fetuses than it helps, since many women will quite reasonably avoid physicians altogether during pregnancy if failure to follow medical advice can result in forced treatment, involuntary confinement, or criminal charges. By protecting the liberty of the pregnant patient and the integrity of a voluntary doctor-patient relationship, we not only promote autonomy; we also promote the well-being of the vast majority of fetuses.

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REFERENCES

1. Elias S, Annas GJ. Reproductive genetics and the law. Chicago: Year Book, 1987.
2. Atwood M. The handmaid's tale. Boston: Houghton Mifflin, 1986.
3. Matter of baby "M." Superior Court of New Jersey, Chancery Division/Family, Bergen County, FM-25314-86E, March 31, 1987 (Sorkow J).
4. Annas GJ. Pregnant women as fetal containers. Hastings Cent Rep 1986; 16(6):13-4.
5. Kolder VEB, Gallagher J, Parsons MT. Court-ordered obstetrical interventions. N Engl J Med 1987; 316:1192-6.
6. Hahn RA, Muecke MA. The anthropology of birth in five U.S. ethnic populations: implications for obstetrical practice. Curr Probl Obstet Gynecol Fertil 1987; 10:133-71.
7. Notzon FC, Placck PJ, Taffel SM. Comparisons of national cesarean-section rates. N Engl J Med 1987; 316:386-9.
8. Engelhardt HT. The foundations of bioethics. New York: Oxford University Press, 1985:224-7.

CORRESPONDENCE

STROKE AND ALCOHOL CONSUMPTION

To the Editor: Gill et al. (Oct. 23 issue)¹ claim to have demonstrated an association in men between heavy alcohol consumption and stroke. In their case-control study, the control group was made up of patients admitted to the hospital "for routine surgical procedures" after matching for age, sex, and race and after excluding "those who had conditions with a recognized association with exces-

sive alcohol use (such as trauma, fractures, and peptic ulcer) or diseases known to alter liver function (including carcinoma and infections)." No such restrictions were imposed on the cases. This, in our view, may result in a control group preselected against high levels of alcohol consumption.

Although we are aware of the difficulties inherent in choosing hospital-based controls, it is generally accepted that controls should be representative of cases, if there were no association between disease and exposure.² Could the restrictions imposed by Gill et al. on the controls but not on the cases have created a control group so unrepresentative of cases, if there were no association, that the study was biased in favor of a strong association?

Furthermore, although we realize that alcohol consumption is difficult to estimate when a retrospective approach is used, we question the authors' assertion that data collected years before the stroke may have little relevance to the short-term pathogenesis of the disease. It may be that the lifetime drinking history is a more useful and valid measure of the hazards of alcohol consumption than the average weekly estimate used.

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1. Gill JS, Zezulka AV, Shipley MJ, Gill SK, Beevers DG. Stroke and alcohol consumption. N Engl J Med 1986; 315:1041-6.
2. Schlesselman JJ. Case control studies: design, conduct, analysis. New York: Oxford University Press, 1982.

To the Editor: The article by Dr. Gill and associates on stroke and alcohol consumption shows a definite association between heavy drinking and stroke. This may well be due to specific effects of the alcohol, but their paper did not show this. Unless they controlled for compliance with treatment for hypertension, it would be impossible to make the assumption that the alcohol alone was responsible for the increased risk of stroke. Heavy drinkers are notoriously poor compliers with medication regimens, and this is much more likely to be the cause of the association than alcohol itself.

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To the Editor: The results of the case-control study by Gill et al. provide new evidence of an independent effect of long-term heavy alcohol intake on the risk of stroke in men. We report here our experience in northeastern Italy, a wine-producing area where the level of alcohol consumption is one of the highest in the world and where alcohol abuse is still an important cause of morbidity and mortality.*

*De Marchi S, Cecchin E. Biological markers of alcohol intake among subjects injured in accidents. Br Med J 1986; 293:138.

Letters to the Editor are considered for publication (subject to editing and abridgment), provided that they are submitted in duplicate, signed by all authors, typewritten in double spacing, and do not exceed 40 typewritten lines of manuscript text (excluding references). Submission of a letter constitutes permission for the Massachusetts Medical Society, its licensees, and its assignees to use it in the *Journal's* various editions (print, data base, and optical disk) in anthologies, revisions, and any other form or medium. Letters should not duplicate similar material being submitted or published elsewhere, and they should not contain abbreviations. Financial associations or other possible conflicts of interest should always be disclosed.

Letters referring to a recent *Journal* article must be received within six weeks of the article's publication. We are unable to provide pre-publication proofs, and unpublished material will not be returned to authors unless a stamped, self-addressed envelope is enclosed.

Our retrospective study included all the patients who were admitted to our department between January 1, 1983, and July 31, 1986, for drinking problems — a total of 304 patients, 242 men (mean age \pm SD, 49.3 ± 12.3 years) and 62 women (48 ± 9.9 years). After a preliminary screening questionnaire, inquiries about patients' alcohol consumption and the circumstances of any previous admission were made by personnel trained in the recognition and management of alcohol-related illness. All the patients had a history of alcohol abuse of 10 years or more. They were classified as chronic heavy drinkers or binge drinkers on the basis of the history and their values for gamma-glutamyl transferase activity and mean corpuscular volume (cutoff points, 40 mU per milliliter and 97 fl, respectively).

Most of the chronic heavy drinkers reported a daily alcohol intake of more than 160 g of alcohol. They accounted for approximately 70 percent of the patients among both sexes. We recorded a total of 888 previous admissions (727 among men and 161 among women) to medical, surgical orthopedic, and neuropsychiatric departments and to the intensive care unit. Of these, 230 admissions among men (31.5 percent) and 53 among women (32.9 percent) were clearly attributable to alcohol abuse and requested by the patients or their families for detoxification and psychosocial therapy. Of the remaining 605 admissions, 485 were for alcohol-related diseases, of which trauma and fractures (18 percent), gastrointestinal disease (9.5 percent), psychiatric complications (9 percent), liver disease (8.4 percent), and infections (6.5 percent) were the most frequent. Stroke accounted for 0.8 percent of all the admissions, and only 7 of 304 patients (2.3 percent) — 6 men (2.5 percent) and 1 woman (1.6 percent) — were affected. Their mean age \pm SD was 51 ± 17.5 years. Most were classified as chronic heavy drinkers. They did not show any particular pattern in the biochemical and hematologic markers of alcohol abuse. Hypertension was identified in three patients.

These results do not exclude the possibility that long-term heavy alcohol consumption is an independent risk factor for stroke, as reported by Gill et al., but our experience is that the frequency of stroke among alcohol-related diseases is quite low even in chronic heavy drinkers.

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The above letters were referred to the authors of the article in question, who offer the following reply:

To the Editor: Drs. Kiefe and Freiman rightly point out that there are inherent difficulties in choosing a suitable control group for hospital-based case-control studies. If associations appear, they need to be tested in community-based studies. Indeed, we have carried out a study in which we compared our patients with stroke with a screening survey of local workers in light industry. These data are still being analyzed, but they confirm that heavy consumers of alcohol have an increased relative risk of stroke.

When selecting hospital controls, it is easy to introduce bias either for or against the hypothesis being tested. Had we taken the patients admitted for any surgical procedure, cancer would have been over-represented in the control group. In addition, many orthopedic and trauma patients in district hospitals are admitted as a result of alcohol-related accidents. We have examined our stroke patients to see how many had concomitant conditions that were excluded from the control group. Only one patient with stroke might have been excluded; he suffered trauma to the head after the stroke.

Although we agree that heavy drinkers may be noncompliant with treatment with antihypertensive medication, we do not think this explains our findings. The relation between stroke and alcohol consumption was present in patients both with and without hypertension, as we reported in our paper.

Drs. De Marchi and Cecchin have reported the frequency of prior stroke in young alcoholic patients referred for detoxification and psychosocial therapy. Furthermore, they do not tell us the incidence of stroke in a control group. Their data are not comparable to ours, since we were looking at all stroke patients, of whom only a minority would be alcoholic.

It is difficult to be certain whether cardiovascular morbidity and mortality in relation to alcohol intake is an effect of short-term drinking habits or a long-term consequence of lifetime drinking. The importance of short-term alcohol consumption is illustrated by its relation to blood pressure, although this is not necessarily the mechanism for alcohol-related stroke.

In the Kaiser-Permanente study, previous heavy drinkers did not have higher blood pressure than light drinkers.¹ Furthermore, in a study of alcoholic patients, we found that blood pressure was related to alcohol intake in the previous three months, but not to the calculated lifetime consumption.² We also have data on factory workers showing that blood pressure is more closely associated with alcohol consumption over the three days before the measurement than with intake five to seven days earlier.³

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1. Klatsky AL, Friedman GD, Siegelab AB, Gérard MJ. Alcohol consumption and blood pressure: Kaiser-Permanente multiphasic health examination data. *N Engl J Med* 1977; 296:1194-200.
2. Saunders JB, Beavers DG, Paton A. Alcohol-induced hypertension. *Lancet* 1981; 2:653-6.
3. Maheswaran R, Gill JS, Beavers DG. The effect of alcohol on blood pressure is due to recent alcohol intake. *Clin Sci* 1987; 72:Suppl 16:70p. abstract.

INAPPROPRIATE USE OF HOSPITALS

To the Editor: The article by Siu et al. (Nov. 13 issue)* raises some important questions. The first concerns the use of experts and the Appropriateness Evaluation Protocol (AEP) as yardsticks for measuring the appropriateness of a hospital admission. How would the protocol evaluate an elderly patient with normal vital signs, normal laboratory data, and normal x-ray findings who reports vague abdominal and back pain? Could the AEP or an expert reviewing this patient's chart judge better than I whether this patient may or may not have a dissecting abdominal aortic aneurysm? If it turns out that he does not have a dissection, is the admission for observation inappropriate? Given the fact that a number of catastrophic illnesses do not declare themselves in the emergency room, is a 23 percent rate of inappropriate admissions necessarily bad, and what is an acceptable rate?

In fact, how much better is the so-called gold standard with which we are compared? The authors report that the two expert reviewers in their study disagreed with each other 17 percent of the time and that the experts were at variance with the AEP 25 percent of the time. As a primary care physician, I question the assertion that the AEP or expert physicians looking at a chart can reliably judge decisions made by competent physicians at the bedside.

It would be naive for me to assert that there are no inappropriate hospital admissions. However, as a physician involved in utilization review, I confess confusion in distinguishing between unavoidable and inappropriate admissions. For instance, assuming that the hospital is going to be used only for acute care, it might be inappropriate to admit a 90-year-old patient with a sprained ankle. However, if the patient lives alone and has arthritis in his other leg, is it appropriate to send him home without regard to whether he will be able to manage the activities of daily living? My experience has been that the vast majority of "soft" admissions that do not require acute care fall into the category of custodial care. I agree that it is a wasteful use of resources and that some other services should provide more cost-effective care. It is also clear that many communities lack such outpatient services and that the hospital becomes a haven of last resort. This is, indeed, a problem of the maldistribution of resources, but is it the physician's "fault" for admitting the patient?

The physician is not responsible for these problems of inadequate social planning, and he or she is not in a position to change them. Solutions that attempt to coerce the physician by manipulating admitting practices will be met with hostility and subversion and

*Siu AL, Sonnenberg FA, Manning WG, et al. Inappropriate use of hospitals in a randomized trial of health insurance plans. *N Engl J Med* 1986; 315:1259-66.