epileptics receiving treatment with phenytoin or carbamazepine were found to have increases in serum AAG concentrations with consequent increased binding by plasma proteins of basic drugs such as lignocaine and propanolol.

We wish to report our findings in healthy male subjects receiving short-term treatment with carbamazepine. AAG concentrations were measured in a single batch by radial immunodiffusion (ICL Scientific) before (week 0) and after two weeks (week 2) of treatment with carbamazepine, 400 mg daily. Mean AAG concentrations (±SEM) did not change (week 0: 85 ± 9 mg/dL, week 2: 80 ± 6 mg/dL, n = 14) despite significant induction of hepatic microsomal enzymes as evidenced by increased cortisol oxidation and antipyrine clearance (5).

In previous studies we have measured concentrations of sex-hormone binding globulin (SHBG) and thyroid binding globulin (TBG) in subjects taking carbamazepine (6, 7). The maximum increase in SHBG was found after two weeks of therapy (week 0: 27.5 ± 2.2 μmol/L; week 2: 32.8 ± 3.8 μmol/L; p = 0.05, n = 6). On the other hand, no increase in TBG concentration (7) was found (week 0: 20.6 ± 0.7 mg/L; week 2: 21.2 ± 0.6 mg/L; n = 10).

We therefore conclude that short-term therapy with carbamazepine does not cause changes in AAG concentrations despite significant induction of hepatic enzymes and increased SHBG concentrations. These data are consistent with those reported for rifampicin, a potent inducer of hepatic enzymes in man (8). Rifampicin treatment is associated with increased SHBG capacity (9), but does not alter serum AAG concentrations (9). The mechanisms whereby these enzyme-inducing agents cause complex changes in concentrations of the circulating globulins are not understood. Because patients are exposed to enzyme-inducing anti-convulsants for many years, the actions of these agents on the circulating globulins in these patients deserve further investigation.

References

Shigeki Sakata
Takashi Komaki
Shigenori Nakamura
Kiyoji Miura

The Third Dept. of Internal Med.
Gifu Univ. School of Med.
Gifu 500, Japan

Lack of Effect of Carbamazepine on Serum α1-Acid Glycoprotein Concentration

To the Editor:

We read with interest the contradictory reports (1, 2) concerning the effects of carbamazepine on the acute-phase reactant, α1-acid glycoprotein (AAG). These reports were stimulated by previous studies (3, 4) in which drugs and α1-acid glycoprotein. N Engl J Med 307, 1148 (1982). Letter.


W. G. Rapoport
MRC Unit and University Dept.
Radcliffe Infirmary
Oxford OX2 6HE, U.K.

Altypical CK and Cardiac Surgery: Further Comments

To the Editor:

In the recent Letter by Van Lente and Abbott (1), in which they discuss the supposed prognostic value of cathodally migrating CK (mCK-2) in patients’ sera after cardiac surgery, they refer to an earlier paper by Keshgegian and Marchant (2), who showed an apparent link between mCK-2 and mortality after surgery, a finding that is at variance with our own experience. They (1) make the valid point that the presence of adeny late kinase should be ruled out before one decides whether a given specimen contains mCK-2. However, they also imply that a difference in electrophoretic techniques might account for the discrepancy, even though the report by Wu et al. (3), showing a 2% prevalence of mCK-2 among hospitalized children, would suggest that the agarose technique is adequately sensitive to detect the variant. Wu et al. also used the Paragon system, which contains a concentration of the adeny late kinase inhibitor (AMP) equal to that used by Van Lente and Abbott (1).