

sulfhydryl groups before determining the enzyme activity. Cunningham *et al.* say that the study was performed shortly after the Barnes Hospital laboratory began determining CPK activity. No data are presented about the accuracy and reliability of the laboratory's determination at that time. Farina, Litwinko and Bremner (1973) have called attention to inaccuracies of 30–70 per cent in CPK reference sera for the Auto-Analyser method employed by Cunningham *et al.* Such errors rarely occur in a research laboratory which is devoted to high accurate and reliable determinations of selected biological variables. There is no way of ascertaining whether major errors of this type occurred in the Cunningham study, but they certainly could have.

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DEAR SIR,

We do not claim that we have refuted Professor Meltzer's findings; rather that our study fails to confirm them. We began investigation with the hope

that some small group of rigorously defined patients would show consistent elevations of CPK. That none did surprised us.

We agree with Professor Meltzer that one feature of our research design, namely failure to withhold intramuscular injections, rendered our study an inadequate test of his claim. However, the bulk of research on this subject—research which Professor Meltzer cites in support of his position—not only incorporates this same defect of design but is compounded by other deficiencies. For instance, the established relationship between alcohol and elevated CPK has been largely ignored in CPK investigations. Chronic heavy alcohol intake is very common among psychiatric in-patients, including those with an admitted diagnosis other than alcoholism.

Regarding the criticism that we do not provide the time of onset of illness, we would suggest that a glance at Table II indicates such information is available.

The problem of who is psychotic and who is not is perennial. Use of the term has been confusing for at least a half a century. Renard Hospital is an acute treatment centre in an urban setting. Approximately a quarter of our patients are admitted with hallucinations, delusions or what is sometimes described as 'loss of contact with reality'. We investigated these patients as well as others.

Professor Meltzer's hypothesis has not been refuted. But it has not been confirmed, and will not be until prospective studies are accomplished in which intramuscular injections are withheld, patients with other potential causes of elevated CPK are carefully removed from study, and rigorous criteria for establishing the diagnosis of 'acute psychosis', dating its onset and evaluating its intensity are developed.

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