LETTER TO THE EDITOR

- *The British Heart Journal welcomes letters commenting on papers that it has published within the past six months.*
- *All letters must be typed with double spacing and signed by all authors.*
- *No letter should be more than 600 words.*
- *No letter should contain more than six references (also typed with double spacing).*

Estimation of the risk of death after acute myocardial infarction from systolic time intervals

SIR,—Dr B J Northover's study (1989;62: 429–37) adds a critical link to the chain of evidence supporting the use of the systolic time intervals, specifically the ratio of the pre-ejection period to the left ventricular ejection time (PEP/EP), as a valuable mortality risk indicator after acute myocardial infarction. In an earlier investigation on 578 patients with acute myocardial infarction, Northover showed that the PEP/EP ratio was a potent predictor of the risk of death during the in-hospital treatment period.[1] In the recent study, Northover followed for 51 weeks 600 patients who had survived the first seven days after acute myocardial infarction. Again the PEP/EP ratio was a good indicator of the risk of death. The PEP/EP ratio has been shown to be an independent indicator of the risk of death in patients studied 14 months to 6 years after acute myocardial infarction,[2] which suggests that the PEP/EP ratio retains its prognostic potency for at least the first 6 years after acute myocardial infarction.

In the recent Northover Study multivariate analyses of the predictive power of the PEP/EP ratio and a host of clinical prognostic indicators showed that the PEP/EP ratio and five clinical descriptors including the number of previous myocardial infarctions, diabetes mellitus, age, diuretic treatment, and bundle branch block retained maximal prognostic power. Among these the PEP/EP ratio clearly had greatest prognostic impact. In the patients studied between 14 months and 6 years after acute myocardial infarction,[2] univariate analysis showed that the PEP/EP ratio and age > 60, angina pectoris, dyspnoea, previous myocardial infarction, presence of S3 gallop, and cardiomegaly on chest radiograph were significant prognostic factors and that the PEP/EP ratio was the strongest prognostic factor.

Northover examined 24 hour rhythm monitoring tapes and the signal averaged electrocardiogram as electrophysiological variables that may provide independent mortality risk discriminating power. None of the commonly tested rhythm disturbances added independently to mortality risk after allowance for the PEP/EP ratio and the five clinical descriptors noted above. The occurrence of late potentials on the signal averaged electrocardiogram, which showed a significant independent univariate association with mortality, did not augment the mortality risk discriminating power of the PEP/EP ratio combined with the five clinical descriptors listed above.

These observations draw attention to the potency of the PEP/EP ratio as an indicator of mortality risk in patients with recent and remote myocardial infarction. The high sensitivity (88%) and specificity (96%) of the PEP/EP ratio in detecting abnormal and normal global ejection fraction in patients with previous myocardial infarction[3] supports evidence that these measures may be equally potent discriminators of mortality risk. As yet we do not know whether the PEP/EP ratio adds significantly to or substitutes for the ejection fraction measurement in mortality risk discrimination.

I congratulate Dr Northover for his singular effort in contributing evidence that a measure of ventricular function, other than the global ejection fraction, can provide more potent mortality predictive power than commonly applied clinical descriptors; this relatively inexpensive approach to the assessment of ventricular function seems to be a better predictor of risk than 24 hour rhythm monitoring and the signal averaged electrocardiogram.

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1 Northover BJ. Left ventricular systolic time intervals in patients with acute myocardial infarction. *Br Heart J* 1980;43:506–13.
2 Weissler AM, O'Neill WW, Sohn YH, Stack RS, Chew PC, Reed AH. The prognostic significance of systolic time intervals after recovery from myocardial infarction. *Am J Cardiol* 1981;48:995–1002.
3 Stack RS, Sohn YH, Weissler AM. Accuracy of systolic time intervals in detecting abnormal left ventricular performance in coronary artery disease. *Am J Cardiol* 1981;47:603–9.

BOOK REVIEWS

William Heberden. Physician of the Age of Reason. Ernest Heberden. (Series: Eponymists in Medicine) (pp. xiv + 246; £12.95 hardback; £7.95 softback) London: Royal Society of Medicine Services, 1989. ISBN I-85315-116-5.

Great biographers not only write about their subjects but in a sense become the subjects. The writer must be immersed in the appropriate time and place, recognising that subsequent historical changes may influence present interpretation. If written or oral records are sparse, the author cannot penetrate the mind and heart of the subject of the biography. Then the alternative choices are adherence to established facts, with speculation about what has come to be called "soft" data, or historical fiction. To some extent all biographies are historical fiction, for the characters portrayed exist only in the imagination of the writer.

Ernest Heberden is the fifth generation descendant of William Heberden, the eighteenth century physician. In view of Heberden's eminence as a London practitioner, the respect in which he was held by colleagues and the general public, his original medical contributions, and his popular "Commentraries on the History and Cure of Diseases" it may seem surprising that no full-scale biography has been written previously. Ernest Heberden admits limited knowledge of his distinguished ancestor before his investigation and "no family archives," but he did an exhaustive search of historical records, William's publications, and his available preserved letters. Despite this diligent pursuit, the elder Heberden escapes the firm grasp of the biographer. One is forced to conclude that William Heberden wished to obscure his personal life and that of his family. Neither he nor his son, William, disclosed much information that could not have been gathered from other sources. William Heberden had famous and influential friends in and out of his profession, but apparently few intimates. His friends made numerous references to his pleasing personality, hospitality, calm judgment, rectitude, frankness, erudition, clarity, modesty, and religious faith as well as his professional ability. Heberden was the personal physician of two insightful and highly critical observers: Samuel Johnson and John Hunter. It is possible that none of his distinguished friends felt that they knew the inner man well enough to undertake a biography or that he dissuaded them. Certainly, he outlived most of his contemporaries and he may have so awed younger men that none attempted a biography.

The bare facts of Heberden's life are impressive. He was a poor London boy who had the good fortune to be stimulated by an inspiring grammar schoolmaster who pushed him into study of classic languages and arranged his entrance into Cambridge University at the age of 14. He continued his scholarly studies, mastering Latin, Greek, and Hebrew, as well as other academic subjects. Deciding to study medicine at Cambridge, he spent some time in an unspecified London hospital. He was permitted to accelerate his programme and was awarded the MD degree at the age of 27. William remained at Cambridge, teaching materia medica and seeing local patients. After a decade, he moved to London and met with early success in practice.

Although London had several prominent surgeons on the staffs of various hospitals, most of its well known physicians saw patients in the physician's home, in the patient's home, or in coffee houses. Heberden did not approve of medical education in London hospitals, but he was powerless to change the system. His admirable qualities were recognised quickly by colleagues and patients and soon he was considered to be one of London's leading physicians. The author traces William Heberden's rise to the top of the profession as well as his invaluable contributions to the Royal Society and the College of Physicians. He was instrumental in organising publication of the *Medical Transactions of the College of Physicians* and read numerous papers before the college, both original and communications from friends or acquaintances. Heberden enrolled in what he knew was an unpopular cause: the right of Dissenters (those not members of the Church of England) to join the College of Physicians.