Use of aspirin by general practitioners in suspected acute myocardial infarction

Michael Moher, Neil Johnson

Southmead Surgery,
Farnham Common,
Buckinghamshire SL2 3ER
Michael Moher, general
practitioner

Department of Public
Health and Primary Care,
Gibson Building, Radcliffe
Infirmary, Oxford
OX2 6HE
Neil Johnson, Imperial
Cancer Research Fund
research fellow

Correspondence to:
Dr Moher.

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The second international study of infarct survival clearly showed a 25% reduction in mortality when 160 mg aspirin was given within the first four hours of the onset of chest pain.¹ These effects add to those of streptokinase. The role of general practitioners in managing patients with suspected acute myocardial infarction was reviewed by a British Heart Foundation working group in the light of these results.² Its report recommended early therapeutic intervention with aspirin and the rapid transfer of patients to hospital for intravenous thrombolysis. We therefore looked at the use of aspirin by general practitioners and the time taken from the onset of symptoms to hospital admission and thus to intravenous thrombolysis.

Patients, methods, and results

All patients admitted with acute chest pain by their general practitioner to one of two district general hospitals over the six months from 1 December 1991 to 31 May 1992 were entered into the study. The hospitals both serve mixed urban and rural areas in England, one in the south midlands and the other in the south east. Patients (or those accompanying them) were asked by the nursing staff about the time of onset of the chest pain and whether they had been given aspirin before admission. Times of admission to hospital and of administration of intravenous thrombolytics were also recorded. The letter accompanying the patient was examined to ascertain the general practitioner's provisional diagnosis and for evidence of whether aspirin had been given. All records were completed within 24 hours of admission. Patients were defined as having received aspirin either if they recalled having been given aspirin or if the letter accompanying them stated that it had been given.

Overall, 156 patients were admitted by their general practitioner. Fifteen questionnaires were not completed, mainly because the time of onset of symptoms was unclear. Four patients were admitted with a provisional diagnosis of non-cardiac chest pain. The remaining 137 patients were admitted either with a diagnosis of ischaemic heart disease or without a specific diagnosis having been made. Of these, 102 were men. The mean age was 62.0 years.

The various delays between onset of symptoms and

thrombolysis are shown in the table. Twenty six patients were given aspirin before admission. The 96 patients who subsequently had proved myocardial infarction were no more or less likely to have received aspirin before admission. There were no significant differences between the two hospitals.

Delays between onset of symptoms and thrombolysis in 137 patients admitted with suspected myocardial infarction by general practitioner

Delay	Median (interquartile range) (minutes)
Between onset of symptoms and arrival in hospital	179 (95-265)
Between arrival in hospital and intravenous thrombolysis	82 (38-125)
Between onset of symptoms and intravenous thrombolysis	248 (110-360)

Comment

Although the method chosen for this survey is likely to result in an underestimate of aspirin use by general practitioners, it is of some concern that despite the proved benefit of aspirin¹ only one fifth of patients presenting with acute chest pain received aspirin before admission. The delays to intravenous thrombolysis in our study are consistent with those reported by Birkhead,³ with a median time of around four hours for patients admitted by their general practitioner. If patients start to receive aspirin only when they receive intravenous thrombolytics some of the benefit of aspirin will have been lost.¹

While the delays to intravenous thrombolysis remain long³ overall mortality could be reduced if more general practitioners gave 150 mg aspirin (chewed for better absorption) to all patients with suspected acute myocardial infarction. This simple treatment is more likely to be acceptable than the introduction of intravenous thrombolysis in the community. Furthermore, the observation that patients are admitted much more rapidly if they call the ambulance themselves³ suggests that the time may be right for aspirin to be carried and given by ambulance crews.

We thank all the nursing staff in the two hospitals who participated in the study and Liz Kwantes for writing the computer program.

1 ISIS-2 (Second International Study of Infarct Survival) Collaborative Group. Randomised trial of intravenous streptokinase, oral aspirin, both, or neither among 17 187 cases of suspected acute myocardial infarction. *Lancet* 1988;ii: 349-60.

2 British Heart Foundation Working Group. Role of the general practitioner in managing patients with myocardial infarction: impact of thrombolytic treatment. *BMJ* 1989;299:555-7.

3 Birkhead JS. Time delays in provision of thrombolytic treatment in six district hospitals. *BMJ* 1992;305:445-8.

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Pre-hospital opiate and aspirin administration in patients with suspected myocardial infarction

Hazel R Wyllie, Francis G Dunn

Cardiac Department,
Stobhill General Hospital,
Glasgow G21 3UW
Hazel R Wyllie, senior house
officer
Francis G Dunn, consultant
cardiologist

Correspondence to:
Dr Dunn.

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The benefit of immediate oral aspirin in the treatment of acute myocardial infarction is now established, having an equivalent impact to that of intravenous thrombolytic therapy in reducing early mortality.¹⁻³ Though practical problems still exist with pre-hospital thrombolysis, aspirin can easily be given in this setting. Pain relief is a fundamental component and opiate analgesia is thought to be the most effective treatment.

It is accepted that the route of administration should be intravenous rather than intramuscular, which can result in erratic absorption,⁴ haematoma formation, and a spurious increase in creatine kinase activity.⁵

The aim of this study was to assess the frequency with which aspirin was given acutely in patients suspected of acute myocardial infarction and the frequency and route of opiate analgesia given at home.

Patients, methods, and results

From August 1992 to February 1993, 160 patients (110 male) admitted to the coronary care unit at this hospital with suspected myocardial infarction were studied. Patients were interviewed at the time of arrival by means of a questionnaire administered by the admitting medical or senior nursing personnel. All