Multiple primary melanoma: risk factors and prognostic implications

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BMJ 1994;309:375

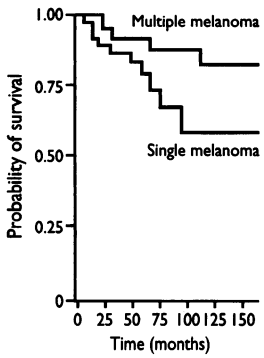
Patients who have had one cutaneous melanoma are at increased risk of developing a second primary melanoma. Previous studies may have overestimated this risk as they have been of patients from specialist referral centres and so are subject to selection bias.[1-4] We report the risk of and mortality from multiple primary melanoma in a well defined, geographically based group of British patients with primary melanoma.

Patients, methods, and results

The Scottish Melanoma Group maintains a well validated database of all cases of melanoma diagnosed in Scotland.[5] We studied 3818 patients (from a population of 3 907 300) who had been registered with the group as having primary melanoma between 1979 and 1991.

Forty five patients developed more than one histologically confirmed invasive primary melanoma, giving a prevalence of multiple melanoma of 1·2% (95% confidence interval 0·8% to 1·5%). We estimated that the risk of patients with a single melanoma developing a second primary melanoma during the period of the study was increased roughly 200-fold. Thirty eight patients developed two melanomas and five patients three; two patients developed five and six melanomas. In 12 patients the first two melanomas were synchronous and in 33 the second melanoma was diagnosed within two years of the first. The mean Breslow thickness of the first melanoma was 2·1 mm, but the second melanoma was significantly thinner at 1·2 mm. This was the only difference between patients with multiple melanoma and those with a single melanoma.

We carried out a case comparison study of mortality from melanoma in which each patient with multiple melanoma was randomly matched with a patient with a single melanoma in terms of age, sex, Breslow thickness, and body site. The figure shows the survival curves of the two groups. The apparent survival advantage in those with multiple melanoma was not significant when the two groups were analysed as two independent samples (log rank test: P=0·058).



Comparative survival curves in 38 matched patients with single and multiple primary melanomas

In a second case comparison study 21 patients with multiple melanoma and 21 controls (selected as above) were questioned about known risk factors for melanoma; the skin was examined and a mole count performed. We found that a family history of melanoma and the presence of one or more naevi with histological features of atypia were each independently associated with a significantly increased risk of multiple primary melanoma. There was an excess of benign naevi and non-melanoma skin cancer in the patients with multiple melanoma, but this did not reach significance. None of the other risk factors studied was significantly associated with multiple melanoma.

Comment

The prognosis for patients with multiple primary melanoma seems slightly better than that for those with a single melanoma. This is unexplained because the patients with multiple melanoma in this study did not differ from those with a single melanoma in any of the known prognostic factors for melanoma, other than Breslow thickness, which was controlled for. This finding is reminiscent of the survival pattern of female patients with melanoma: women have a higher incidence of melanoma than men but a better prognosis.

Patients who have already had one primary cutaneous melanoma have a substantially increased risk of developing further primary melanomas, which should be borne in mind when making follow up arrangements. A family history of melanoma and the presence of atypical naevi are risk factors for multiple melanoma but would not predict most cases if used to direct surveillance. Most second melanomas in this study occurred within two years of the first, and in over a quarter of cases they occurred synchronously. All patients with melanoma should be educated about the early clinical features of primary melanoma. At diagnosis and at follow up visits the whole skin should be examined, not only the original site and draining lymph node basin.

We are grateful to the Scottish Melanoma Group for access to the patient data and to Mrs Jenny Stewart and Miss Evelyn Salt for retrieval of data. The Scottish Melanoma Group is funded by the Cancer Research Campaign.

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(Accepted 24 March 1994)

Survey of general practitioners' prehospital management of suspected acute myocardial infarction

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BMJ 1994;309:375-6

The effectiveness of thrombolysis in acute myocardial infarction is greater the shorter the time between onset of symptoms and administration of thrombolysis.[1] Recent guidelines for the British Heart Foundation suggest that thrombolysis should be given within 90 minutes.[2] Debate continues, however, about the best way to give thrombolysis and about the role of general practitioners.[3,4] We studied general practitioners' knowledge of and attitudes and behaviour towards patients with suspected acute myocardial infarction and considered the relevance of our findings to the development of district policies.

Subjects, methods, and results

Between June and August 1992 we sent a questionnaire to all general practitioners (n=205) who refer patients to Plymouth's coronary care unit, where all hospital thrombolysis for myocardial infarction in Plymouth district is given. The district is clearly divided into rural and urban areas, with 143 urban and 62 rural general practitioners and longer times for travelling to hospital from the rural areas. We asked about the doctors' knowledge of thrombolysis; attitudes to aspirin; administration of thrombolysis and

use of electrocardiography; and behaviour with respect to patients with suspected acute myocardial infarction.

During the same period we reviewed the records of all patients admitted to the coronary care unit who were given thrombolysis (n=149). We determined the total number of patients admitted with a final diagnosis of myocardial infarction (n=222) from the hospital computer system. We recorded details of prehospital electrocardiography, administration of thrombolysis and aspirin, and delay between symptoms and use of thrombolysis. For geographical reasons, no other coronary care unit is available for over 95% of the district's population so the patients admitted accurately reflect general practitioners' behaviour.

In all, 180 (88%) general practitioners completed the questionnaire (88% of urban and 87% of rural doctors). Knowledge of thrombolysis was reasonable, with 148 (82%) respondents giving the correct answer to one or more of three questions. Most general practitioners (98 (54%)), however, did not consider that giving thrombolysis was part of their job (table); 80 of the 98 respondents gave more than one reason, but the two most common reasons (each given by 60 (61%) respondents) were diagnostic uncertainty and practical difficulties. With respect to electrocardiography in patients with acute chest pain, respondents did not consider it useful (72 (40%)), were neutral (41 (23%)), or considered it worthwhile (67 (37%)). Aspirin was valued, however, with 160 (89%) respondents stating that they gave aspirin routinely.

Examination of the records showed that thrombolysis was given by only one (1%) general practitioner (once); prehospital electrocardiography was performed on 16 (11%) occasions; and aspirin was given on 43 (29%) occasions. The difference between this finding on aspirin and the stated routine practice of 89% (in the questionnaire) is significant ($P<0.001$, 95% confidence interval 51% to 69%).

In all, 142 records had complete information about delay between onset of symptoms and administration of thrombolysis. Surprisingly, no significant correlation existed between urban or rural residence and delay: median delay was 5·1 hours and 4·5 hours respectively.

Results of survey in 1992 of 180 general practitioners in Plymouth District Health Authority about their attitudes to giving thrombolysis in patients with suspected acute myocardial infarction. Values are numbers (percentages)

When asked whether giving thrombolysis is part of general practitioner's job:	General practitioners		
	Urban (n=126)	Rural (n=54)	Total (n=180)
Agreed	24 (19)	13 (24)	37 (21)*
Were uncertain	24 (19)	21 (39)	42 (25)
Disagreed	78 (62)	20 (37)	98 (54)
Administration of thrombolysis by general practitioners likely in practice	18 (14)	8 (15)	26 (14)

Significant difference between urban and rural general practitioners, $\chi^2=11·3$, 2df, P=0·004.
*95% confidence interval 15% to 26%.

Comment

This survey suggests that general practitioners, although well informed about managing suspected acute myocardial infarction, do not wish to give thrombolysis themselves and do not often give aspirin or perform electrocardiography. Only 67% of patients admitted with acute myocardial infarction, however, were given thrombolysis, although these patients were probably those in whom general practitioners believed myocardial infarction was most likely and who were therefore admitted to the coronary care unit.

These findings are relevant in formulating district policies for maximum benefit from thrombolysis. Although the delay between onset of symptoms and administration of thrombolysis is reduced when thrombolysis is given before a patient is admitted—by 60 minutes on average,[4] perhaps more if given by a general practitioner[5]—a considerable change in general practitioners' attitude and behaviour is needed if they are to give thrombolysis routinely. Doctors in primary and secondary care must work together in this field as in others.

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(Accepted 7 July 1994)

Prevalence of HIV infection in pregnant women in London and elsewhere in England

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BMJ 1994;309:376-7

In 1990 a programme based on the unlinked anonymous test method began in England and Wales to monitor the prevalence of HIV infection. It included a survey of blood specimens collected from pregnant women for rubella screening in London and other parts of England.[1] Forty antenatal centres took part: 15 in London, 19 in three other cities (Manchester, Leeds and Bradford), and six in non-metropolitan areas near to these four cities. The survey began in January 1990 but ended outside London in 1992 when a strategic decision was taken to use dried blood spots from newborn infants as the preferred method for monitoring maternal HIV-1 infection in areas with lower prevalence.[2] The survey continues in London, and we present data to the end of June 1993.

Methods and results

Specimens were grouped by antenatal centre, calendar quarter in which serum was collected, and age (four age groups) and were irreversibly unlinked from the source women. Specimens were tested with a commercial HIV-1 and HIV-2 enzyme immunoassay (Wellcozyme HIV1+2); repeatedly reactive specimens were tested by other assays, including western blotting, at the national reference laboratory.[1] We used logistic regression analyses to model the variation in the number of tests that yielded positive results for HIV infection, allowing for differences among study centres and the relation between the prevalence of HIV-1 infection and time, age group, and centre.

In all, 405 077 specimens were tested between January 1990 and June 1993 (175 957 from London,