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.

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 practitioner²—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.

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)

	General practitioners		
	Urban (n=126)	Rural (n=54)	Total (n=180)
When asked whether giving thrombolysis is part of general practitioner's job:			
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%.

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

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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,

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The collaborative group implements the unlinked anonymous HIV seroprevalence monitoring programme in laboratories in hospitals.

HIV-1 infection in women attending antenatal centres in London, other metropolitan areas, and non-metropolitan areas from January 1990 to June 1993. Values are numbers of women unless stated otherwise

	Objections to unlinked anonymous testing	Tested for HIV-1 infection	HIV-1 infected	Prevalence (%)	Range (%)*
<i>London (15 centres)</i>					
Total 1990:	255	175 957	397	0.23	0.04-0.51
Total	21	42 737	77	0.18	0.0-50
Age (years):					
< 20	3	3 016	5	0.17	
20-4	6	10 066	23	0.23	
25-9	7	13 891	31	0.22	
≥ 30	4	15 053	17	0.11	
Not known	1	711	1	0.14	
1991:					
Total	52	54 338	114	0.21	0.0-59
Age (years):					
< 20	6	3 633	3	0.08	
20-4	18	12 099	32	0.26	
25-9	12	17 646	53	0.30	
≥ 30	15	20 177	23	0.11	
Not known	1	783	3	0.38	
1992:					
Total	143	52 354	137	0.26	0.07-0.51
Age (years):					
< 20	10	3 349	6	0.18	
20-4	36	10 938	34	0.31	
25-9	46	17 181	60	0.35	
≥ 30	47	20 273	36	0.18	
Not known	4	613	1	0.16	
1993 (first six months)					
Total	39	26 528	69	0.26	0.0-51
Age (years):					
< 20	1	1 636	3	0.18	
20-4	13	5 364	22	0.41	
25-9	13	8 624	24	0.28	
≥ 30	12	10 668	19	0.18	
Not known	0	236	1	0.42	
<i>Metropolitan areas outside London (19 centres)†</i>					
January 1990 to June 1993	188	162 386	20	0.01	0.0-0.03
<i>Non-metropolitan areas (six centres)†</i>					
January 1990 to June 1993	14	66 734	5	0.01	0.0-0.02
Total	457	405 077	422	0.10	0.0-51

*Lowest and highest prevalence at an individual centre.

†Testing ended in non-metropolitan Thames regions in March 1992 and in one region outside London at beginning of 1993.

162 386 from the other cities, and 66 734 from the non-metropolitan areas). The volume of serum in 2616 (0.64%) specimens was insufficient for testing, and objections to testing led to the exclusion of 457 (0.11%) specimens. The prevalence of HIV-1 infection in the London centres was 0.23% (table). It varied significantly with age, ranging from 0.15% in women aged < 20 and 0.14% in those aged > 29 to 0.29% in those aged 20-24 and in those aged 25-29. The prevalence of HIV-1 infection was significantly higher in London than elsewhere, but substantial variation was observed among the London centres (from 0.04% to 0.51%). The prevalence of HIV-1 infection was 0.011% in the cities outside London and 0.007% in non-metropolitan centres. The highest prevalence in a centre outside London was 0.03%, which was lower than the lowest prevalence in London; this centre and an adjoining centre accounted for nine of the 25 infections outside London. The prevalence of HIV-1 infection in specimens from women attending London centres was 0.18% in 1990 compared with 0.21% in 1991 and 0.26% in 1992 and in the first half of 1993 (table). The rise was significant over time when allowance was made for the effects of centre and age ($P=0.006$), and it occurred in each age group.

Comment

The upward trend in the prevalence of HIV-1 infection in pregnant women in London is probably not an artefact as it is consistent across the age groups and most of the study centres. The higher prevalence and the rise in prevalence in the London centres could be explained either by a net immigration of infected women from sub-Saharan Africa^{1,2} or by an increase in

transmission of the HIV-1 infection within Britain.³ Both mechanisms are probably operating. In other countries the prevalence among pregnant women has levelled off or even declined.^{4,5} We do not therefore expect the rise to continue indefinitely, but the situation will require careful monitoring.

The incidence of AIDS in some European countries is three to four times that in England and Wales. The prevalence of maternal HIV-1 infection in London, however, is comparable with that in the worst affected cities, such as Paris (0.25% in 1992-3) and Rome (0.12% in 1992).^{4,5} As the prevalences in Paris and Rome are not rising the situation in London seems to be worse.

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