ovulation.[1] [2] It follows that women reach their fertile days earlier in the cycle than suggested by current guidelines. For example, women with regular 28 day cycles are most likely to be potentially fertile on days 8-15 of their menstrual cycle (fig 3).

Advice to couples

Figure 1 may be useful for couples who wish to time their intercourse to occur during the woman's fertile window. This approach can be improved by taking into account the regularity and usual length of the woman's cycle (figs 2 and 3). Because we excluded couples with known infertility problems, our data do not necessarily apply to couples having trouble conceiving. Any couple wishing to have a baby can easily avoid the uncertainty of predicting fertile days by engaging in intercourse two or three times a week.[1]

Abstinence on specific days of the menstrual cycle remains a method of family planning for many couples worldwide.[18] Women should be aware that no calendar method is completely effective. Our data suggest there are few days in the menstrual cycle during which some women are not potentially capable of becoming pregnant—including even the cycle day on which they may expect their next menses to begin.

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Cross sectional study of differences in coronary artery calcification by socioeconomic status

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The relative contribution of socioeconomic differences in risk factors in adulthood versus earlier life to the social class gradient in coronary heart disease is controversial.[1] Socioeconomic position in childhood was a strong predictor of stroke and cancer mortality in the Boyd Orr cohort but it had only a weak association with mortality from coronary heart disease.[2] Furthermore, there is no social class gradient in intermediate vascular outcomes such as arterial distensibility in children.[3] We examined whether there is a social class difference in coronary heart disease in adults in early mid-life by using a subclinical measure of coronary artery disease—coronary artery calcification.

Methods and results

We looked at the prevalence of coronary artery calcification in 149 men and women aged 30-40 (mean (SD) age 36 (2.5)) in relation to socioeconomic status. Participants were randomly sampled from the lists of patients from two general practices in London. Participants were included regardless of their cardiovascular history, although none had a history of coronary heart disease. The participants had formed the comparison group for a larger study that included type 1 diabetic patients.[4] Two measures of socioeconomic status were used: current social class by own occupation using the registrar general's classification and whether they were in full time education at age 19. Fasting lipids were measured. We used electron beam computed tomography to quantify coronary artery calcification, a method that has been validated as a measure of coronary plaque volume.[5] The odds of having any detectable calcification associated with social class were examined by using logistic regression, adjusting for covariates. These models were

repeated, examining education instead of social class. Approval was obtained from the ethics committee, and participants gave written informed consent.

Being in the manual social class (26%) was associated with a significantly higher prevalence of calcification (odds ratio = 2.3, 95% confidence interval 1.3 to 5.2, P = 0.04), as was having left full time education before the age of 19 (odds ratio 2.8 (1.2 to 6.3), P = 0.01). Adjusting for age, sex, systolic blood pressure, high density lipoprotein cholesterol, low density lipoprotein cholesterol, triglycerides, alcohol consumption, and body mass index either singly or simultaneously attenuated the odds ratios for social class (adjusted odds ratio = 2.0, 95% confidence interval (0.7 to 5.2), P = 0.2) and educational status (adjusted odds ratio 2.2 (0.8 to 6.0), P = 0.1) only slightly, although their significance was reduced. Adjusting for pack years of smoking and physical activity level in those 126 participants on whom these data were available did not alter the odds ratio. In this subgroup the odds ratio for social class was 1.8 and was 3.0 for educational status, both before and after adjustment.

Comment

The study shows that socioeconomic differences in coronary artery calcification already exist in men and women in their 30s. A socioeconomic difference in the precursor non-calcified lesions of atherosclerosis may be present even earlier in the life course. Social class differences in coronary risk factors were generally small or non-existent in this cohort (data not given) and explained little of the social class difference in coronary artery calcification.

The unequivocal class difference in people in their 30s has important implications. Firstly, interventions aimed at reducing inequalities in heart disease must include young adults and possibly children. Secondly, studies of socioeconomic gradients in coronary heart disease that do not consider the risk factor profiles of participants in their 20s and 30s are unlikely to explain the gradient in full. Thirdly, the paucity of effect of adjusting for established risk factors on class difference emphasises that the biological mechanisms through which social inequalities affect risk for coronary heart disease have yet to be discovered. Finally, electron beam computerised tomography is an important technique for exploring the basis of socioeconomic differences in coronary disease in relatively young cohorts.

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Corneal donation in the accident and emergency department: observational study

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Corneal grafting restores sight to individuals with corneal damage. Corneal donations have decreased recently from 4419 in 1996 to 3346 in 1998.[1] Patients pronounced dead in accident and emergency departments are potential donors of corneas for 24 hours, but this resource is underused.[2] In the year before the study only one pair of corneas (1 of 106 deaths (0.9%)) was donated in our department.

The study consisted of developing a policy to request consent for corneal donation and to determine whether the rate of corneal donation was affected. In addition, a simple questionnaire assessed relatives' attitudes to corneal donation.

Methods and results

All patients pronounced dead in the accident and emergency department from April to July 1999 were considered for the study. Exclusion criteria were suspicious deaths, patients < 16 years old, contraindication to corneal donation (scarring or deterioration of tissue, infectious disease in the eye tissue, rare invasive brain tumour, Alzheimer's disease or other disease of unknown aetiology), or no relatives present within six hours of death.

All relatives were asked whether the patient carried a donor card or had expressed a wish to donate organs, including corneas. Once consent was granted, we then checked whether there were any contraindications. The transplant coordinator was contacted and the relatives of patients in the study were asked two simple questions in a questionnaire: whether they thought it was appropriate to be approached about corneal donation in accident and emergency; and whether they were offended or distressed by the request.

During the four month study period 47 deaths occurred in the department. Eleven patients were excluded, comprising six suspicious deaths, three with

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