Serum IgM testing is needed in all cases of suspected measles

EDITOR,—We agree with Laura Ryall and colleagues that testing for virus specific IgM, in either a saliva specimen or a serum sample, is the appropriate initial method for diagnosing measles.¹ The main advantage of IgM testing, given the current epidemiology of measles in England and Wales, is its high specificity.

Currently measles infections are rare, and less than 1% of notified cases have been confirmed by IgM assay of saliva in the past six months.² In this context, even a test that was 99% specific would be expected to have a positive predictive value of around 50%: for every 1000 suspected cases tested there will be about 10 false positive and 10 true positive results. Since 1995, therefore, the Public Health Laboratory Service Communicable Disease Surveillance Centre has requested additional tests on all cases of laboratory confirmed measles reported in England and Wales. The reporting doctor or laboratory has been asked to refer a serum specimen for IgM assay, either to a local laboratory or to the Public Health Laboratory Service Enteric and Respiratory Virus Laboratory.

Table 1—Cases of measles reported to Communicable Disease Surveillance Centre by method of diagnosis

Initial method of diagnosis	Serum measles IgM result		
	No reported	No tested	No (%) positive
Single high IgG in CFT	46	31	13 (42)
Fourfold rise in IgG in CFT	12	8	3 (38)
Salivary IgM test	38	12	8 (67)
Serum IgM test*	11	8	5 (75)
Total	107	59	29 (49)

CFT = complement fixation test.

*Reports of cases that were positive on IgM testing by ELISA and were retested with an IgM antibody capture radioimmunoassay.

Since the beginning of 1995, 107 confirmed cases have been reported from laboratories in England and Wales, of which only 11 had been confirmed by a serum IgM test before the report. The remaining 96 cases had been diagnosed by the detection of specific salivary IgM or by serum complement fixation tests for IgG (table 1). Additional serum IgM testing was performed with various commercial enzyme linked immunosorbent assay (ELISA) kits (Behring, Sigma, Biostat) or an in house IgM antibody capture radioimmunoassay.³ The proportion of cases that were confirmed as positive by serum IgM testing was not high (table 1), and even some cases reported as positive on IgM testing were not confirmed by a second test. In the three cases with discrepant serum IgM results, specimens were retested with a different ELISA (Denka-Seiken); two gave a negative result and one an equivocal result. This confirms the low positive predictive value of all the diagnostic methods and suggests that many cases diagnosed serologically are false positive cases.

The Public Health Laboratory Service is now following up all confirmed cases of measles to investigate the possible source of infection and to identify remaining pockets of susceptible subjects. For this reason it is important that cases diagnosed by any method (including assay of saliva) are confirmed by one or more specific

serum IgM assays. We are thus asking clinicians and laboratories to submit serum samples from such cases for additional tests.

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Psychiatric and psychological aspects of hysterectomy

Authors did not specify type of hysterectomy carried out

EDITOR,—Unfortunately, rather than encourage gynaecologists to adopt new and conservative surgical techniques, David A Alexander and colleagues' study will confirm the opinion of the diehards that hysterectomy is a "good treatment" for women and lead them to discount those who are trying to find new methods of treatment.¹ The fact that the trial presupposed the outcome goes without saying, as the women were preselected and those who had an oophorectomy—the group who experience the most trauma from hysterectomy—were excluded.

It is unfortunate that so many gynaecologists believe that healthy ovaries should be removed at hysterectomy and that a healthy cervix is a non-essential part of a woman's body. The fact that the authors make no mention of whether the hysterectomies were total or subtotal illustrates what I mean. Gynaecologists routinely remove healthy cervixes and never consider that they need to ask the patient her opinion on the subject. One would have expected women who were left with their cervix intact to have fewer psychiatric problems.

I suspect that any study that fails to mention what type of hysterectomy was carried out is deliberately trying to show the operation in a good light. I would like to know what type of hysterectomy was performed and how the 204 subjects in the trial were selected.

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- 1 Alexander DA, Naji AA, Pinion SB, Mollison J, Kitchener HC, Parkin DE, et al. Randomised trial comparing hysterectomy with endometrial ablation for dysfunctional uterine bleeding: psychiatric and psychosocial aspects. *BMJ* 1996;312:280-4. (3 February.)

Study did not reliably exclude possibility of psychological damage

EDITOR,—David A Alexander and colleagues conclude that there is no evidence that hysterectomy leads to postoperative psychiatric illness and that endometrial ablation and hysterectomy have a similar effect on psychiatric outcome.¹ Their conclusion rests heavily on the appropriateness of the main instrument used to explore psychiatric outcome. They used the hospital anxiety and depression scale. This is a useful screening instrument, and it is also a good way of

monitoring change in established depressive illnesses or anxiety states, but it is not a diagnostic tool for discerning psychiatric illness. The authors' attempted validation of the scale is limited. They used the structured clinical interview, which enables psychiatric diagnoses to be made according to the *Diagnostic and Statistical Manual of Mental Disorders, Third Edition*, and they did this for only 21 of the 204 women, all of whom were classed as being depressed when the hospital anxiety and depression scale was used. Given that most of the women in the study were not designated as depressed when the scale was used, it is difficult to see how this sample could be what the authors describe as a random sample.

It is now well established that one of the most important influences on postoperative psychiatric morbidity is preoperative psychiatric state² but that this does not exclude coexistent negative psychological effects of hysterectomy in some women. Numerous psychological sequelae have been linked to hysterectomy. For example, sexual functioning is improved in at least 30% of women but can be negatively affected in up to 38%.³ Other negative effects include feelings about the loss of womb and childbearing capacity in younger women, adverse effects on women's self image, social disruption due to a long recovery time, a slow return to normal life, and postoperative complications in some women.² Endometrial ablation leaves more choices, has fewer complications,³ and reliably reduces menstrual loss (with an average reduction of more than 90%).⁴

We acknowledge that future studies may redefine the risks of hysterectomy, but in our view Alexander and colleagues' study has not excluded the possibility of psychological damage in some women. Awareness of psychological problems and screening for psychological morbidity remain important elements in the assessment and follow up of women complaining of heavy periods, both in clinical practice and in research.⁵

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- 1 Alexander DA, Naji AA, Pinion SB, Mollison J, Kitchener HC, Parkin DE, et al. Randomised trial comparing hysterectomy with endometrial ablation for dysfunctional uterine bleeding: psychiatric and psychosocial aspects. *BMJ* 1996;312:280-4. (3 February.)
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Results will depend on whether hysterectomy was essential or not

EDITOR,—David A Alexander and colleagues' conclusion that there is no evidence that hysterectomy leads to postoperative psychiatric illness was ensured by the design of their trial.¹ They did not specifically ask the women about their body image before and after operation, they assume that women who are willing to be randomised are typical of all women, and the women were probably carefully counselled.

Women vary in their feelings about their womb: for some it is nothing but a nuisance, while for others it is the organ that defines them as women or is essential for sexual enjoyment. The latter women will avoid hysterectomy. In addition, Kuh and Stirling found that women who leave school without a qualification are 18 times more likely to have a hysterectomy than those who leave with a qualification.²

After publicity in newspapers I was contacted by over 120 women who had either awoken from an operation to find that they had had an unexpected hysterectomy or had been coerced into consenting to one. Many had been told "You will not feel any less of a woman afterwards," only to find that they did. It is difficult to tell a doctor that you feel something that he or she has said you will not feel. Many of the women were even more dismayed to be told after the operation that their wombs were normal. A study needs to be carried out into the psychosexual consequences of hysterectomy that the patient knows was unnecessary, that was unexpected, or that was done on a reluctant patient.

Twenty years ago women with breast lumps had to sign away their breast before exploratory surgery. Now, thanks to a battle fought and won by women and aided by some good and kind surgeons, they go for a biopsy knowing that they will still have that breast when they awake, that a histological diagnosis will be made, and that they can then discuss treatment options with their surgeon. No such courtesy is afforded to women with benign uterine disease, who are treated by hysterectomy and often castrated with little prior investigation.

A psychosexual study of women who have undergone essential hysterectomy for endometrial or invasive cervical cancer would give a better idea of how women feel about losing their wombs when the operation is life preserving.

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- 1 Alexander DA, Pinton SB, Kitchener HC, Parken DE, Abramovitch DR, Mollison J, *et al*. Randomised controlled trial comparing hysterectomy with endometrial ablation for dysfunctional uterine bleeding: psychiatric and psychosocial consequences. *BMJ* 1996;312:280-4. (3 February.)
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Genetic liability to osteoarthritis may be greater in women than men

EDITOR,—Tim D Spector and colleagues report a study of genetic influences on osteoarthritis in monozygotic and dizygotic female twins.¹ They conclude that their results show a clear genetic effect for radiographic osteoarthritis of the hand and knee in women (ranging from 39% to 65%) independent of known environmental or demographic confounders. In his commentary on the paper John Hopper states that these figures must be considered to be an upper bound of the genetic influence.¹

In a questionnaire sent to the Finnish twin cohort in 1990 we asked about the prevalence of osteoarthritis (in any joint) diagnosed by a physician.² Self reports tend to be specific but not very sensitive. In the age group 33-60, 1757 male twin pairs (577 monozygotic and 1180 dizygotic) and 2338 female twin pairs (836 monozygotic and 1502 dizygotic) responded. Both twins reported osteoarthritis in eight (1.4%) monozygotic and 24 (2.0%) dizygotic male pairs and in 26 (3.1%) monozygotic and 43 (2.9%) dizygotic female pairs. Only one twin reported osteoarthritis in 66 (11.4%) monozygotic and 155 (13.1%) dizygotic male pairs and in 85 (10.2%) monozygotic and 219 (14.6%) dizygotic female pairs.

In male pairs the tetrachoric correlation coefficient for liability to osteoarthritis was 0.34 (SE 0.12) in monozygotic pairs and 0.38 (0.07) in dizygotic pairs. Model fitting indicated that the data were adequately accounted for ($\chi^2 = 2.09$, $P = 0.72$) by a model with shared (non-genetic) familial effects accounting for 37% of the total variance in liability to the disease and unshared familial effects accounting for 63%. Models that included genetic effects fitted significantly worse.

In female pairs the tetrachoric correlation coefficient for liability to osteoarthritis was 0.62 (0.07) in monozygotic pairs and 0.42 (0.06) in dizygotic pairs. Model fitting indicated that the data were best accounted for ($\chi^2 = 3.82$, $P = 0.28$) by a model with additive gene effects explaining 44% of the variance in liability to the disease, shared familial effects accounting for 20%, and unshared familial effects accounting for 36%. Models that did not include genetic effects fitted significantly worse.

Our data for women are consistent with those of Spector and colleagues,¹ who report that 41-46% of the variance in the narrowing trait score for all joints in their subjects was accounted for by additive genetic effects. In contrast, our results for men indicate that genetic effects may be modulated by sex or by environmental factors distributed differently between men and women. We are currently investigating our affected pairs. Until now, however, investigators have held genetic defects responsible for only a small fraction of cases of osteoarthritis.

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Hospital at home

Research is needed into organisation and development as well as cost effectiveness

EDITOR,—I agree with Sasha Shepperd and Steve Iliffe that the cost effectiveness of hospital at home services is still in question.¹ I am less sure that we will know the answer in 1997 when the results of randomised trials become available. The heterogeneity of the schemes will greatly reduce the generalisability of the randomised trials, which, to be feasible, have had to be restricted to looking at patients with selected conditions.

I have been involved in the evaluation of both hospital at home and other, similar schemes. They varied greatly in their organisation and aims. The following observations arise out of my contact with these services.

The secret of success seems to be, firstly, that such services are run from a hospital base or at least with strong commitment from hospitals.

This is essential both to ensure that patients are enrolled into the service and to effect the reduction in hospital beds that should result from the schemes. Secondly, the schemes need to be firmly embedded in existing mainstream services. This will permit more flexibility in the use of staff and less duplication and may resolve problems of recruitment. A full time coordinator is essential to ensure communication across primary and secondary care. Thirdly, we need to develop the technological side of home care. Until now, schemes in Britain have not been very revolutionary or innovative. In the Netherlands the Institute for Applied Home Care Technology has used technological developments to the maximum to keep people at home.² In France and Sweden home care services also have a high degree of technological input. In Britain, however, a survey found that only 15% of schemes provided or were planning to provide specific technological services.¹

Several issues have resulted in the inability of hospital at home schemes to achieve their potential. These include the difficulty of coordination across the social and health sectors as well as the community and acute trusts. I believe that we are evaluating these schemes too early and are in danger of dismissing them too fast. If we put our energy into researching only cost effectiveness and exclude research on organisation and development then we are at risk of throwing the baby out with the bath water.

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- 1 Shepperd S, Iliffe S. Hospital at home. *BMJ* 1996;312:923-4. (13 April.)
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Scheme in Peterborough is expanding

EDITOR,—Sasha Shepperd and Steve Iliffe raise some important questions about hospital at home services and suggest that their future is uncertain.¹ We confess a personal interest. One of us (JKA) was involved in the early phase of the scheme in Peterborough, another (JWM) was responsible for its extension to early postoperative care of patients with fractured hips,² and GAP and MP continue to use the scheme for their (orthopaedic) patients. A study of early discharge of patients with hip fracture was carefully constructed to avoid bias.³ The catchment area of the orthopaedic service is considerably larger than the area for which the hospital at home scheme is available. This geographical factor eliminates the possibility of a conscious or unconscious bias in the selection of patients for early discharge into the scheme. The groups of patients studied were found to have identical physical and mental characteristics. Hollingworth *et al* examined the two populations as a whole to assess the effect of the availability of a hospital at home service.⁴ They concluded that selection bias did not occur.

The initial scheme in Peterborough was a tangled procedure and unpopular with general practitioners. The current model, fully incorporated in primary care,⁵ has endured since 1979 and continues to expand. At a time when health services all over Britain are susceptible to rationalisation, the health of the Peterborough model has ensured its survival. It should be remembered, however, that a small scheme with patients scattered over a large geographical area will have higher costs per patient than a large scheme with a heavier geographical concentra-