Management of cervical dyskaryosis

National guidelines are not followed

EDITOR,—We hope that the work of G Flannelly and colleagues will help bring uniformity to the management of different grades of dyskaryosis in cervical smears.[1] The management of mildly dyskaryotic smears is not uniform throughout Britain. Kitchener observed in 1991 that 37% of the 210 health districts investigated had a policy of referring patients for colposcopy if a single mildly dyskaryotic smear was obtained.[2] The guidelines on cervical screening produced under the auspices of the national coordinating network provide a clear strategy for the management of different grades of dyskaryosis.[3]

Although the national guidelines on cervical screening were widely distributed among gynaecologists, the extent to which they are followed is unknown. To investigate compliance with the national guidelines among the consultants in gynaecology and obstetrics in the north west of England a postal questionnaire survey was carried out in October 1992 by a regional working party of the Royal College of Obstetricians and Gynaecologists' audit unit. The response rate was 100%. Although, according to the national guidelines, referral for colposcopy is advisable only after two consecutive mildly dyskaryotic smears have been obtained, 13 of the 69 consultants surveyed considered a single mildly dyskaryotic smear to be an appropriate criterion for referral. Consultants who performed colposcopy themselves were more likely to consider the procedure for a single mildly dyskaryotic smear than consultants who did not perform colposcopy (11/45 (24%) *v* 2/24 (8%)).

A uniform strategy of referral for colposcopy for all grades of dyskaryosis would probably be welcomed by doctors working in both primary and secondary care. An easier protocol is more likely to be remembered and adhered to, but two potential problems exist. Firstly, without further allocation of resources the delay between referral and appointment to a colposcopy clinic will worsen. Secondly, with the present popularity of immediate treatment with diathermy loop excision, many women will be treated unnecessarily. For example, of 158 women with a mildly dyskaryotic smear, 40 had no further dyskaryosis after 24 months' surveillance.[1]

ARABINDA SAHA
Lecturer in obstetrics and gynaecology
University Hospital of South Manchester,
Manchester M20 2LR

M MARESH
Consultant in obstetrics and gynaecology
St Mary's Hospital,
Manchester M13 0JH

1 Flannelly G, Anderson D, Kitchener HC, Mann EMF, Campbell M, Fisher P, *et al.* Management of women with mild and moderate cervical dyskaryosis. *BMJ* 1994;308:1399-403. (28 May.)
2 Kitchener HC. United Kingdom colposcopy survey, British Society for Colposcopy and Cervical Pathology. *Br J Obstet Gynaecol* 1991;98:1112-6.
3 Duncan ID. *NHS cervical screening programme: guidelines for clinical practice and programme management.* Oxford: National Coordinating Network, 1992.

Immediate colposcopy is necessary

EDITOR,—In 1993 a review of cervical smears previously reported at Inverclyde Royal Hospital, Greenock, as showing no abnormality resulted in the reclassification of the smears of 1954 women to various categories of abnormality. Because of the original misclassification further gynaecological assessment was delayed by at least one year. All women who were still resident locally and whose smear had been reclassified as showing mild dyskaryosis or worse were offered a fast track colposcopy appointment, while women whose smear had been reclassified as unsatisfactory or "borderline" were offered a fast track repeat smear test. Women no longer resident locally were contacted, usually by their current general practitioner; their current situation was determined and follow up recommended when appropriate.

The smear was reclassified as borderline in 614 women, as showing mild dyskaryosis in 268, and as showing moderate dyskaryosis in 78. These women were followed up, and, when available, the findings on cervical biopsy were obtained (table). Our findings support those of the prospective study reported by G Flannelly and colleagues.[1] We agree that women with any degree of dyskaryosis should be referred for colposcopy.

M A THOMAS
Consultant pathologist
Inverclyde Royal NHS Trust,
Greenock PA16 0XN

L M REAY
Consultant
Department of Public Health,
Argyll and Clyde Health Board,
Paisley PA2 7BN

1 Flannelly G, Anderson D, Kitchener HC, Mann EMF, Campbell M, Fisher P, *et al.* Management of women with mild and moderate cervical dyskaryosis. *BMJ* 1994;308:1399-403. (28 May.)

Colposcopy is not cost effective

EDITOR,—We welcome G Flannelly and colleagues' finding that cytological surveillance is safe, particularly as this agrees with our report on women who have mild dyskaryosis.[2] The authors' conclusion that cytological surveillance is not efficient, however, warrants further discussion. Their published data do not provide evidence of safety; presumably none of the 40 women with normal smears (in their figure) had cervical intraepithelial neoplasia grade III, although an estimated 40 of the 82 women with persistent dyskaryosis requiring colposcopy were found to have cervical intraepithelial neoplasia grade III. The estimate is based on the 187 women with cervical intraepithelial neoplasia grade III among the 538 with mild dyskaryosis (their table IV).

Efficiency should imply a lower cost for each case of cervical intraepithelial neoplasia grade III detected. No evidence for this is provided in the paper, and the comment seems to be based on the small proportion of women (40/158) who completed the 24 month surveillance programme.

We have reported previously, on the basis of audit of our practice, that the marginal cost of detecting additional cases of cervical intraepithelial neoplasia grade II or III by using immediate colposcopy rather than cytological surveillance may be as high as £1200.[3] This applies specifically to women showing good compliance during cytological surveillance after a first mildly dyskaryotic smear has been obtained. Clearly, cytological surveillance is more efficient for women who do not default. The problem of defaulting can be tackled in several ways, but, most importantly, education of patients must be improved.

An alarming proportion of women with an abnormal smear still think that they have cancer. Many methods of improving communication have been advocated and shown to be successful. For example, explanatory leaflets describing the nature of the abnormality and subsequent management are effective. Personal communication, rather than a letter from the general practitioner or practice nurse, has been recommended. If the patient continues to default then she should be referred immediately for colposcopy.

Surely a policy of blanket referral for a potentially unpleasant examination that provokes anxiety (colposcopy) is no substitute for better education of patients.

M H JONES
Senior registrar
Department of Obstetrics and Gynaecology,
Mayday University Hospital,
Croydon,
Surrey CR7 7YE

J J JONES
Consultant in public health
Leicestershire District Health Authority,
Leicester LE1 6TY

1 Flannelly G, Anderson D, Kitchener HC, Mann EMF, Campbell M, Fisher P, *et al.* Management of women with mild and moderate cervical dyskaryosis. *BMJ* 1994;308:1399-403. (28 May.)
2 Jones MH, Jenkins D, Cuzick J, Wolfendale MR, Jones JJ, Balogun-Lynch C, *et al.* Mild cervical dyskaryosis—safety of cytological surveillance. *Lancet* 1992;339:1440-3.
3 Jones MH, Jones JJ. Management of mildly abnormal smears. *Lancet* 1993;342:813.

Findings on cervical biopsy in women whose smears had been reclassified. Figures are numbers (percentages) of women

Reclassified result of smear test	No of women	Women in whom findings on biopsy were obtained	Finding on biopsy	
			CIN grade II	CIN grade III
Borderline	615	91 (15)	7 (1)	28 (5)
Mild dyskaryosis	268	189 (71)	11 (4)	32 (12)
Moderate dyskaryosis	78	57 (73)	7 (9)	15 (19)

CIN=Cervical intraepithelial neoplasia.

Accurate diagnosis is essential

EDITOR,—G Flannelly and colleagues recommend that mild dyskaryosis should be managed by immediate colposcopy rather than cytological surveillance.[1] Their conclusion is logical, but is it practical outside a specialised unit?

The problem lies in the lack of accuracy in the diagnosis of low grade lesions. This has been well documented for histological diagnosis.[2] Many would agree that neither cytopathologists nor histopathologists can distinguish mild dyskaryosis from human papillomavirus infection, which is extremely prevalent.[3] The selection of dyskaryotic smears for external quality assurance schemes

often results in many being discarded because of disagreement about the diagnosis among pathologists. This is important. Also, in contrast to the situation in the authors' "dedicated colposcopy clinic," the skill generally available varies. Not uncommonly, in patients whose smears show mild dyskaryosis biopsy specimens show only human papillomavirus infection. This is likely to result in coagulation or excision of much of the cervix or referral for regular colposcopic examination, each time with a smear being taken. Default by patients or overtreatment is then likely.

The authors accept that cytological surveillance is safe, and this seems the key issue. If several dyskaryotic smears are obtained before colposcopy they at least provide some assurance of an abnormality that is persistent and probably dysplastic in nature.

We have several concerns about the study by W P Soutter and Astrid Fletcher relating mild dyskaryosis to invasive cancer.[4] It seems unsatisfactory to include moderate dyskaryosis, which is generally considered to be a higher grade lesion, in surveys of mild dyskaryosis. The inclusion of borderline smears is worse, this term meaning only atypical smears that may indicate an invasive cancer. The inclusion of cases of microinvasive disease would result in an overestimate of invasive disease. Diagnosing microinvasive disease can be difficult, and pathologists tend to report it in biopsy specimens so that patients receive adequate treatment. We have found considerable variation among laboratories in the number of their reports of microinvasive disease. The quality of smears is also an unknown variable in the surveys cited. A poorly taken smear may contain only mildly dyskaryotic cells from the exocervix, but a well taken one may contain severely dyskaryotic cells from the endocervix.

These issues are still unresolved. We recently reported our findings in smears from women who later developed cancer.[5] A much larger study should provide reliable information on the cytological changes preceding cancer.

J H ROBERTSON
Consultant cytopathologist
BERTHA WOODEND
Clinical scientist

Cytopathology Department,
Laboratories,
Belfast City Hospital,
Belfast BT9 7AB

1 Flannelly G, Anderson D, Kitchener HC, Mann EMF, Campbell M, Fisher P, *et al.* Management of women with mild and moderate cervical dyskaryosis. *BMJ* 1994;**308**:1399-403. (28 May.)
2 Robertson AJ, Anderson JH, Swanson Beck J, Burnett RA, Howatson SR, Lee FD, *et al.* Observer variability in histopathological reporting of cervical biopsy specimens. *J Clin Pathol* 1989;**42**:231-8.
3 Richart RM, Wright TC. Controversies in the management of low-grade cervical intraepithelial neoplasia. *Cancer* 1993;71: 1413-21.
4 Soutter WP, Fletcher A. Invasive cancer of the cervix in women with mild dyskaryosis followed up cytologically. *BMJ* 1994; **308**:1421-3. (28 May.)
5 Robertson JH, Woodend B, Elliott, H. Cytological changes preceding cervical cancer. *J Clin Pathol* 1994;**47**:278-9.

Cytological surveillance will still be necessary

EDITOR,—The articles about cervical screening do not resolve the controversy about cytological surveillance versus immediate colposcopy for mild dyskaryosis.[1-4] The rate of reporting of mild dyskaryosis varies. Follow up studies are impossible to interpret without information about the rates of other grades of dyskaryosis as well as borderline and inflammatory change at the same centre.

Immediate colposcopy is no guarantee against the future development of cervical cancer and does not remove the need for cytological surveillance. Colposcopy itself may yield false negative results, and cytological surveillance is usually needed after colposcopy whether or not cervical intraepithelial neoplasia has been confirmed or treated. Also, cancer may develop after treatment of cervical intraepithelial neoplasia.

The six case studies compared by W P Soutter and Astrid Fletcher are not comparable.[4] Two included moderate dyskaryosis, and one was confined to borderline change; no fully invasive cancers (11 of 25 were microinvasive) occurred in the three studies confined to mild dyskaryosis. No invasive cancers occurred in the study by G Flannelly and colleagues.[2] A recent retrospective study showed mild dyskaryosis to be rare in the screening histories of women developing cervical cancer.[5]

The logical argument for carrying out cytological surveillance after a mildly dyskaryotic or borderline smear is obtained for the first time is that many of these changes represent human papillomavirus infection (often in young women), which may regress. The dividing line between human papillomavirus infection alone and with cervical intraepithelial neoplasia grade I is subjective on both histological and cytological examination. Deciding on management, even after colposcopy and biopsy, may be difficult but is less so once time has elapsed and the changes are known to have persisted for some months.

As with breast screening, avoidance of unnecessary biopsy should be an aim of the programme. Cytological surveillance should be safe so long as expected rates of moderate and severe dyskaryosis are identified. The challenge for those participating in cytopathology training and quality assurance is to make sure that these changes are not being missed or misinterpreted as mild dyskaryosis or borderline or inflammatory change. This should not be compensated for by defensive management, including overinvestigation and overtreatment, which is patronising to the women because it suggests that they cannot be trusted to attend for follow up.[3]

AMANDA HERBERT
Consultant cytopathologist

Southampton General Hospital,
Southampton SO9 1XY

1 Hammond R. Management of women with smears showing mild dyskaryosis. *BMJ* 1994;**308**:1383-4. (28 May.)
2 Flannelly G, Anderson D, Kitchener HC, Mann EMF, Campbell M, Fisher P, *et al.* Management of women with mild and moderate cervical dyskaryosis. *BMJ* 1994;**308**:1399-403. (28 May.)
3 Downey GP, Gabriel G, Deery ARS, Crow J, Walker PG. Management of female prisoners with abnormal cervical cytology. *BMJ* 1994;**308**:1412-4. (28 May.)
4 Soutter WP, Fletcher A. Invasive cancer of the cervix in women with mild dyskaryosis followed up cytologically. *BMJ* 1994; **308**:1421-3. (28 May.)
5 Robertson JH, Woodend B, Elliott H. Cytological changes preceding cervical cancer. *J Clin Pathol* 1994;**47**:278-9.

Regular follow up is the key

EDITOR,—The papers by W P Soutter and Astrid Fletcher and by G Flannelly and colleagues investigate management of women with mild dyskaryosis and conclude that immediate colposcopy for women who present with a single mildly dyskaryotic smear is preferable to a repeat smear test. In showing some improved efficiency in detecting high grade cervical intraepithelial neoplasia in these women by using colposcopy, these results agree with those of previous studies. The claim that this justifies immediate colposcopy of all women with mild dyskaryosis detected by cervical screening requires further examination.

The overall aim of the screening programme is to reduce the incidence of cervical cancer in the whole female population. None of these studies addresses the central question: whether colposcopy for all women with mildly abnormal smears is the most effective way to use limited resources within the current screening programme to achieve this objective. Furthermore, some studies cited by Soutter and Fletcher involved schedules of repeat smear testing with less use of colposcopy than the recommended policy of referral after a single abnormal repeat smear. Their conclusions are not directly relevant to current NHS guidelines. The results of Flannelly *et al* show that a policy of repeat smear testing results in less colposcopy, but leads to important default.

The decision analysis by Johnson *et al* that is quoted to support a low relative cost for colposcopic management is seriously flawed and its conclusions are best ignored.[3,4]

A more rigorous analysis of the overall use of investigations in the screening programme[5] suggests that if women attend regularly there is little difference between the strategies in reducing the incidence of invasive cancer. The median progression of precancer is relatively slow and there are many opportunities to detect precancer under either strategy. However, a strategy of immediate colposcopy requires two or three times as many colposcopic examinations, many of which yield negative results. The problem of default is important but the benefits of immediate colposcopy for these patients have to be weighed against the evidence that a high proportion of invasive cancer occurs in unscreened women and that substantial improvement in overall mortality can only come from improving population coverage of screening.

Concentration on women with mild dyskarosis alone can lead to the introduction of policies which may detract resources from other more important areas of the cervical screening programme.

DAVID JENKINS
Reader in histopathology,

Queen's Medical Centre,
Nottingham NG7 2UH

S GALLIVAN
Senior research fellow
C SHERLAW-JOHNSON
Research fellow

Clinical Operational Research Unit,
Department of Statistical Science,
University College London,
London WC1E 6BT

1 Soutter WP, Fletcher A. Invasive cancer of the cervix in women with mild dyskaryosis followed up cytologically. *BMJ* 1994; **308**:142-3. (28 May.)
2 Flannelly G, Anderson D, Kitchener HC, Mann EMF, Campbell M, Fisher P, *et al.* Management of women with mild and moderate cervical dyskaryosis. *BMJ* 1994;**308**:1399-403. (28 May.)
3 Johnson N, Sutton J, Thornton JG, Lifford RJ, Johnson VA, Peel KR. Decision analysis for best management of mildly dyskaryotic smear. *Lancet* 1993;**342**:91-6.
4 Sherlaw-Johnson C. Management of mildly dyskaryotic smears. *Lancet* 1993;**432**:813.
5 Sherlaw-Johnson C, Gallivan S, Jenkins D, Jones MH. Cytological screening and management of abnormalities in prevention of cervical cancer: an overview with stochastic modelling. *J Clin Pathol* 1994;**47**: 430-5.

Can findings be generalised?

EDITOR,—The paper by G Flannelly and others, and W P Souster and Astrid Fletcher debating surveillance versus immediate colposcopy for mild dyskaryosis are the latest in a longstanding debate.[12] Although the evidence is persuasive, will the conclusion that women should have immediate colposcopy be agreed by all? Fears of overtreatment, worries about laboratory differences, and a lack of perspective on women's views seem the biggest obstacles to a U turn in practice.

Most health districts still practice surveillance and will have to reconsider local policy if the National Coordinating Network changes the guidelines again.[3] Despite the efficiency of immediate colposcopy portrayed by Flannelly *et al,* many will fear the potential overload on their colposcopy clinics. These fears are justified because of the variation in local laboratories' interpretations of minor degrees of nuclear abnormality.

Immediate generalisation of these results may be inappropriate. In both studies the conclusions about managing mild dyskaryosis were based to