Management of women with mild dyskaryosis

Cytological surveillance avoids overtreatment

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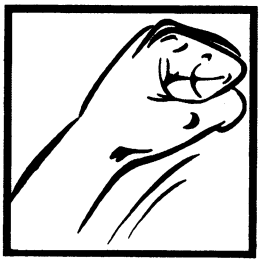


This is the first article in a series examining some of the difficult decisions that arise in medicine

The smear report is undoubtedly the most important variable when deciding whether a woman should be referred for colposcopy. National guidelines on referral for colposcopy also need to consider the scientific data, the availability of facilities locally, and the psychological impact of referral and treatment. The psychological sequelae of referral for colposcopy, with possible treatment, may be greater than the risk of serious disease developing from the abnormality that the smear identified. National experts recently reached a consensus that recommends immediate referral for colposcopy for women with more severe cytological abnormalities and repeat cervical smear tests for those women with macroscopically normal cervices and smears showing mild dyskaryosis or borderline nuclear changes. If smear tests continue to show cytological abnormality the woman is then referred for colposcopy.[1]

In the United Kingdom 5·5 million smear tests are performed annually, of which 2·4% show mild dyskaryosis and 2·2% are reported as showing borderline nuclear abnormalities. In younger women the proportion with borderline or mild changes is about 7·7%. This represents over 250 000 smears reported to show minor cytological abnormalities each year. Though the figures are not directly comparable, this can be related to the fact that about 350 000 girls are born each year in Britain but there are fewer than 1900 deaths a year from cervical cancer, many in women who never had a cervical smear test. The number of women dying from cervical cancer continues to fall, with a 15% decrease in England and Wales between 1985 and 1991.[2] Even some Americans are now suggesting that colposcopy and directed biopsy may not be required for all patients with a slightly abnormal cervical smear, estimating that the overall cost of evaluation and treating women with such abnormalities ranges from $632 million to $1·5 billion annually.[3]

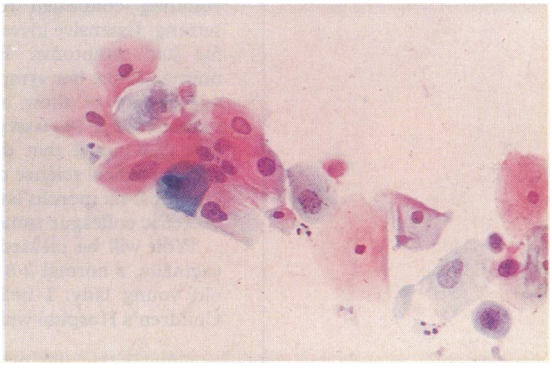
Many women do not need treatment

The only objective way of determining the validity of cytological surveillance for mild cytological abnormalities is by randomised studies, and these are currently under way. One of these has recently reported that cytological surveillance is safe, although it does not seem to be an efficient strategy in their unit.[4] I have to concur with their conclusions based on their data, but the results differ from those of other centres and constitute some of the highest reported high grade abnormality rates for women with mild cytological abnormalities. This highlights the need for quality assurance at all stages of the cervical screening programme. This report is from an area that historically has been well screened, unlike the rest of Britain, and now is experiencing a reduction in the incidence and mortality from cervical cancer, with most cases occurring in the unscreened women or in those who had had few smears at long intervals.[5] Furthermore, the prospective study included women with moderate dyskaryosis for whom there is widespread consensus on immediate referral.

Without data from the other prospective studies we must rely on cross sectional and retrospective studies. All the large studies have suggested that cytological surveillance is safe both individually and in a population setting.[6,7] Furthermore, the risk of invasive disease seems to be the same in women who have had colposcopy and those who have had cytological surveillance. The smears of up to half of women will return to normal without treatment, and in a large retrospective study none of these women developed invasive cancer on longer term follow up.[6]

Critics of cytological surveillance usually cite cross sectional studies which show that up to one third of women with mildly dyskaryotic smears have cervical intraepithelial neoplasia grade III. Studies at Birmingham show that about 19% of women with minor cytological abnormalities will not have any visible lesion. Of the remainder, fewer than 20% will have cervical intraepithelial neoplasia grade III. The most important variable for the presence of a lesion is duration of cytological abnormality, and the most important independent prognostic factors for serious disease are the area of the lesion and the results of careful repeat cervical smear tests. Studies confirm the need for a secondary screen that allows discrimination of high and low grade disease in women with mild cytological abnormalities. The semiquantitative polymerase chain reaction may allow this distinction but large population based studies are needed before it can be widely used.[8]

The low risk of progression to invasive disease in women with mild dyskaryosis and cervical intraepithelial neoplasia grade III is probably explained by the small size of such lesions. This contrasts with previously quoted risks of progression that relate to women with severe dyskaryosis and grade III cervical intraepithelial neoplasia, which almost certainly represented large volume disease.[9,10] As the abnormality either increases in size or worsens in histological grade, the cervical smear will also show more severe changes. Those lesions that are transient and unlikely to progress to invasive cancer will regress and the smears return to normal.



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A smear showing mild dyskaryosis

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Problems of colposcopy

Advocates of immediate colposcopy usually cite the early diagnosis of microinvasive cancer. They forget that colposcopists have a poor track record at recognising early invasive changes.[11] A major disadvantage of early colposcopy referral has been the see and treat policy for managing women with any degree of cytological abnormality. This has been made possible by the widespread introduction of large loop excision of the transformation zone. In one of the largest reported series looking at the procedure 27% of the women treated had no abnormality or koilocytic atypia.[12] If we include those women with grade I cervical intraepithelial neoplasia, which has a low risk of progression to invasive disease, the overtreatment rate rises to 45%. Large loop excision is considered by many to be associated with minimal morbidity, but this discounts psychosexual morbidity, secondary haemorrhage, vaginal discharge, and a 1·3% risk of cervical stenosis after treatment. This is of particular concern to women who have not completed or started childbearing. The whole situation concerning colposcopic assessment is further complicated by the absence of quality control.

Currently we have guidelines for clinical practice and programme management for the cervical screening programme.[1] Inroads are being made into the incidence of and mortality from cervical cancer. Scarce resources are best spent on reaching non-attenders as they represent a particularly high risk group rather than on women at low risk of invasive disease (one mildly abnormal cervical smear), particularly as early colposcopy has no effect on this risk. Once other loopholes in the screening programme have been addressed the subject of referral for mild cytological abnormalities could be revisited. We must not use screening to turn people into patients and health into disease. The interests of the women are best served by a balanced approach that takes into account not only the most satisfactory clinical management but also the most effective use of resources in terms of cost and staff.

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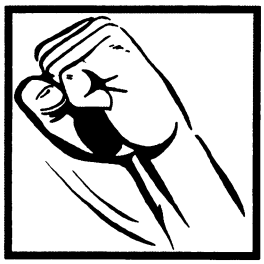
Immediate referral to colposcopy is safer

W P Soutter



Cervical cytological screening is effective in reducing the incidence of and mortality from cervical cancer.[1] However, no screening test is perfect, and invasive squamous cancers do occur in screened women.[2] As coverage of the population increases, management of mild cytological abnormalities will become more important. Currently, about 2% of all smears in England and Wales are reported to show mild dyskaryosis, although it varies among regions.[3] In 1987, the intercollegiate working party on cervical cytology screening recommended immediate colposcopy for all women with dyskaryosis, where resources permitted,[4] but others have subsequently suggested various formulas for cytological surveillance.

A retrospective study in the United Kingdom in 1986 showed that 48% of women with mild dyskaryosis had cervical intraepithelial neoplasia grade II or III.[5] The rate of abnormality did not depend on the number of mildly dyskaryotic smears before referral. This high prevalence of grade II or III neoplasia has been confirmed by prospective studies.[6 6a] Some people have suggested that most of these lesions are small and inferred that the risk of progression to invasive disease will be less than with larger lesions.[7] But there are no data to support that contention.

Surveillance is inadequate

Cytological surveillance is often said to allow most women with mild dyskaryosis to avoid colposcopy. However, after two years only a quarter will have an abnormal smear result.[6 6a] An analysis of all the recent studies of cytological follow up in the United Kingdom showed that the cumulative referral rate after about four years ranged from 14% to 64%.[8] The two studies with the lowest referral rates had the highest rates of invasion.

One of the main measures of the success of cervical screening is the incidence of invasive cancer. In one retrospective study of cytological surveillance that has been widely quoted as reassurance of the safety of this approach, 10 of the 1781 patients developed invasive cancer.[9] Excluding the three carcinomas that occurred in the 434 women who were lost to follow up, this represents an annual incidence of invasive cancer of

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Commentary: immediate colposcopy is not justified

Cervical screening reduces the incidence of cervical cancer. Optimising the take up rate for cervical screening and the reliability of laboratory analysis is therefore an extremely worthwhile aim. In contrast, the advantages of immediate colposcopy in those with mild dyskaryosis are unclear. The bottom line is that no prospective information from randomised trials is available. On the basis of the information presented here it seems that immediate colposcopy cannot be justified in terms of clinical need or cost. A repeat cervical smear four to six months later with colposcopy if the result is still abnormal is a better way forward, with resources put primarily into optimising the efficiency of cervical screening.—PETER C RUBIN, *professor of therapeutics, University of Nottingham*