Colposcopy and ablative therapy

Until the mid-1970s the standard treatment for cervical epithelial neoplasia was cone biopsy of the cervix, which was both diagnostic and therapeutic. This treatment was successful but entailed young women, often with young families, coming into hospital for three or four days. The whole lesion was removed, and recurrence rates on long term follow up varied from 0.5% to 1.0%. Readmission with secondary haemorrhage was rare. By 1982, however, the study group of the Royal College of Obstetricians and Gynaecologists¹ had concluded that "Ideally no patient with cervical intraepithelial neoplasia should be treated unless there has been prior colposcopic assessment."

The colposcope was pioneered in the United States by Staff *et al.*² and though widely used in Europe in the 1970s it was rejected in Britain because, although a more direct biopsy specimen could be taken, the treatment—cone biopsy—was the same. Furthermore, the colposcope was difficult to use and seemed expensive. Things changed, however, when ablative methods of treatment—cryocautery, diathermy, cold coagulation, and laser—began to be used in conjunction with the colposcope.³ These procedures allow patients to be diagnosed and treated as outpatients with few complications. Staff *et al* found that the area treated by laser ablation heals completely after one month; Mylotte and colleagues found squamous cells covering the wound after 11 days.⁴ Thus there is appreciably less discomfort and vaginal discharge than after a cone biopsy. More recently, Sharp *et al* found that the laser is less likely to cause burying of areas of cervical intraepithelial neoplasia in crypts.⁵ Similar observations were reported by Sevin and colleagues after the use of cryocautery.⁶ Sharp *et al* found that after laser ablation the residual epithelium in the crypts contributed to healing and any residual abnormal cells regenerating in untreated crypts would subsequently appear on the new epithelial surface of the cervix and so could be detected on a cervical smear. Thus laser treatment may be the best way to reduce the risk of subsequent invasive cancer.

Singer (p 1049) claims an immediate success rate of 81% for patients treated by laser. In Aberdeen although 9% had slightly abnormal smears immediately after laser treatment, only 3% were subsequently found to have a second preinvasive lesion confirmed histologically (P M Fisher, personal communication). This confirms the findings of Singer and Walker in 1982.⁷ Given the success rate, there should be little hesitation in promoting the use of the colposcope and vaporisation by laser for treating preinvasive carcinoma of the cervix, although long term follow up has not yet been possible.

It is, however, important that the assessment of the cervix should be carried out by an experienced colposcopist, for the untrained clinician may biopsy the wrong area and histological examination of the specimen will then give a negative result and lull the patient into a false sense of security. The British Society for Colposcopy and Cervical Pathology is making every effort to ensure that this does not happen. Courses are run regularly throughout Britain, and there is no reason why the procedure should ever be undertaken by unskilled staff.

Cone biopsies are part of the general workload of all gynaecology units, but colposcopy tends to be carried out by only one consultant in the department. This means that he or she sees all the patients with positive smears, which constitutes a heavy and increasing workload, for it includes follow up of

the patients. Thus the waiting time for a patient with a positive cervical smear may be almost three months. This is an intolerable wait from both the psychological and the medical point of view and also because some of these patients already have early invasive disease. If it could be guaranteed that the lesion was confined to cervical intraepithelial neoplasia there would be no hurry, but cytopathologists cannot always make such an accurate diagnosis.

Singer and Walker in 1982 concluded that at least three quarters of women with cervical intraepithelial neoplasia stage 3 were suitable for locally destructive procedures.⁷ In Aberdeen laser treatment has been shown to be most useful in women under 40. So cone biopsy is best reserved for the 20%, mainly older women, who have a lesion that extends up the cervical canal.

It is generally accepted that cervical intraepithelial neoplasia stage 3 has recently become more frequent in young women,^{8,9} and this means that there is a danger of overreferral to colposcopy clinics. If only patients at potential risk of having a cervical intraepithelial neoplasia stage 3 lesion are to be referred this requires a high standard of cytopathology. Interpretation of gynaecological smears is difficult, and with large accumulations of smears waiting to be examined cytopathologists and technical staff are working under pressure, which is undesirable and not conducive to high standards.¹⁰ Preferably any abnormal smear should be repeated before the patient is referred for colposcopy, and the decision to refer should be made, in writing, on the cytopathologist's report. In this issue Singer reports that 155 of the 366 cases with positive histological findings were cervical intraepithelial neoplasia stages 1 and 2, and out of the total of 609 cases 99 showed no evidence of premalignancy or malignancy. Of the 373 cases reported from Aberdeen 14% had no confirmed lesion (P M Fisher, personal communication). Until recently it has been accepted that some patients with cervical intraepithelial neoplasia stage 3 will not progress to invasive cancer if left untreated; how many of those with cervical intraepithelial neoplasia stages 1 and 2 will regress is still unknown. Dyskaryotic smears in some young women have been reported to regress.¹¹

Provided that high standards are maintained patients referred with abnormal smears may have an accurate biopsy specimen taken at colposcopy and subsequent successful ablative treatment as an outpatient. The cost of the equipment will undoubtedly be offset by the saving on hospital beds.

J ELIZABETH MACGREGOR

Senior Lecturer,
Cytology Unit,
University of Aberdeen,
Aberdeen AB9 2ZD

- 1 Jordan JA, Sharp F, Singer A, eds. *Proceedings of the study group*. London: Royal College of Gynaecologists, 1982.
- 2 Staff A, Wilkinson EJ, Mattingly RF. Laser treatment of cervical and vaginal neoplasia. *Am J Obstet Gynecol* 1977;128:128-36.
- 3 Jordan JA. Laser treatment of cervical intraepithelial neoplasia. *Obstet Gynecol Surv* 1979;34:831.
- 4 Mylotte MJ, Allan JM, Jordan JA. Regeneration of cervical epithelium following laser destruction of intraepithelial neoplasia. *Obstet Gynecol Surv* 1979;34:859-60.
- 5 Sharp GLM, Cordiner JW, Murray EL, More IAR. Healing of cervical epithelium after laser ablation of cervical intraepithelial neoplasia. *J Clin Pathol* 1984;37:611-5.
- 6 Sevin B, Ford JH, Girtanner RD, Hoskins WJ, Averette HE. Invasive cancer of the cervix after cryosurgery. *Obstet Gynecol* 1979;45:456.
- 7 Singer A, Walker P. Commentary: what is the optimum treatment of cervical intraepithelial neoplasia? *Br J Obstet Gynaecol* 1982;89:335-7.
- 8 Wolfendale MR, King S, Usherwood MMC. Abnormal cervical smears: are we in for an epidemic? *Br Med J* 1983;287:526-8.
- 9 Roberts A. Cervical cytology in England and Wales 1965-80. *Health Trends* 1982;14:41-4.
- 10 Husain OAN. Britain's failure to prevent deaths from cervical cancer. *Br Med J* 1984;289:48.
- 11 Macgregor JE, Teper S. Uterine cervical cytology and young women. *Lancet* 1978;i:1029-31.