

Delay (days)	No (%) of discharge letters received (n=86)	No (%) of discharge summaries received (n=78)
0-2	34 (40)	1 (1)
3-7	41 (48)	8 (10)
8-14	8 (9)	21 (27)
15-21	2 (2)	15 (19)
22-28	1 (1)	8 (10)
29-35		8 (10)
36-42		4 (5)
43-49		6 (8)
≥50		7 (9)

of the total yearly workload (K Stonham, personal communication).

### Comment

My results show unacceptably poor communication between hospitals and general practitioners. Dover and Lowe-Beer showed that it was better to give the initial notification letter to the patient to deliver by hand,<sup>4</sup> and, indeed, an average delay of just over four days seems satisfactory for most admissions. It is, however, difficult to condone or ignore a failure to deliver in 17% of cases. Perhaps the letter's envelope should be marked, "This must be delivered to your general practitioner's surgery as soon as possible."

The reasons why a quarter of discharge summaries were not delivered and the reasons for the long average delay of nearly four weeks from the patient's discharge

to the summary's arrival are undoubtedly multifactorial. The finding that on one day 5% of the total number of yearly summaries were dictated but untyped in a hospital's typing pool suggests, however, that most of the problem is secretarial. No management in industry or efficiently run professional organisation would accept such a backlog, and more secretarial staff are urgently required.

The failure of discharge summaries to arrive leads to errors, omissions, confusion, and all that follows from poor communication. Ideally, they should arrive within one week after the patient's discharge, but this occurred in only 12% of cases. In addition, some initial guidance should be given by an experienced doctor about the purpose and format of these summaries. House officers have to set aside time for ward rounds, clinics, and theatre sessions; discharge summaries are equally important and time should be allocated for their dictation. Most hospital doctors, having never worked in general practice, have little idea of the relevance and importance of the summaries they produce.

I thank Dr P M J O'Donnell for his invaluable help in compiling this paper.

- 1 Mageean RJ. Study of "discharge communications" from hospital. *Br Med J* 1986;293:1283-4.
- 2 Bado W, Williams CJ. Usefulness of letters from hospitals to general practitioners. *Br Med J* 1984;288:1813-4.
- 3 Tulloch AJ, Fowler GH, McMullan JJ, Spence JM. Hospital discharge reports: content and design. *Br Med J* 1975;iv:443-6.
- 4 Dover SB, Lowe-Beer TS. The initial hospital discharge note: send out with the patient or post? *Health Trends* 1984;16:48.

(Accepted 22 March 1988)

## Colposcopy in teenagers

N G Haddad, I Y Hussein, J R B Livingstone, G E Smart

Department of Obstetrics and Gynaecology, Royal Infirmary, Edinburgh EH3 9EW

N G Haddad, MRCOG, senior registrar

I Y Hussein, MRCOG, senior registrar

J R B Livingstone, FRCOG, consultant

G E Smart, FRCOG, consultant

Correspondence to: Dr Haddad.

The national prevalence of cervical precancerous lesions has increased by 60% in the past 15 years,<sup>1</sup> and the mean age of maximal incidence has steadily dropped so that young women in their teens or early 20s are frequently seen with preinvasive cervical cancer. It has also been suggested that the progression of such lesions to invasive cancer may occur more rapidly in younger women.<sup>2</sup> Recent guidelines for cervical screening advocate starting at the age of 20.<sup>3,4</sup> We present here our data on colposcopy in teenagers in a large area clinic.

### Case report

During 1982-5, 3635 women were referred to the Lothian area colposcopy clinic, 121 (3.3%) of them when they were aged under 20. Colposcopy was carried out using the acetic acid technique. In patients with histologically proved cervical intraepithelial neoplasia grade II or III local ablation therapy of the entire transformation zone was performed using either the Sharplan carbon dioxide laser or Semm's cold coagulator. The mean age of the teenagers was 18 years 5 months (range 16 years 8 months to 19 years 9 months). Forty patients were or had been pregnant (18 were parous, 17 had had therapeutic termination of pregnancy, and five were pregnant at the time of referral). Eighty six were taking the combined oral contraceptive pill and two had an intrauterine contraceptive device in situ. Seventy four were smokers. The main source of referral was the general practitioner (55 patients) but 29 were referred from genitourinary clinics, 25 from gynaecology clinics, 10 from family planning clinics,

and two from antenatal clinics. One hundred patients were referred on the grounds of abnormal findings on cervical cytology, of whom only four had a frankly positive smear and 17 had external genital warts. Twenty one had negative smears but were referred because of external genital warts.

Colposcopic examination was satisfactory in 118 patients. In the remaining three patients the upper limit of the transformation zone was not seen despite the use of oral oestrogen, and they underwent cone biopsy. The colposcopic and histological findings of the patients with abnormal smears (100) and those with external genital warts but normal cytology (21) are shown in the table. Among the 38 women with external genital warts 26 (68%) had histologically proved cervical intraepithelial neoplasia. Among the whole group 34 women had colposcopic evidence of a cervical condyloma, nine of whom had had negative findings on cytology. Histological cervical intraepithelial neoplasia was present in 27 of them.

### Colposcopic and histological findings in 121 teenagers

	Suspicious smear	Positive smear	Warts and negative smear
No of subjects	96	4	21
Mean (SD) No (and range) of abnormal smears before referral	1.9 (0.5), 1-4	2.2 (0.5), 1-4	
Mean (SD) duration (and range) of abnormal cytology (months)	10.2 (7.5), 2-48	7.5 (4.6), 3-14	
No of subjects with:			
Satisfactory colposcopy	93	4	21
Normal colposcopy/ histology	9	0	7
Koilocytosis only	4	0	2
CIN I	18	0	7
CIN II	36	2	5
CIN III	29	2	0
Koilocytosis and CIN	53	4	10

CIN = Cervical intraepithelial neoplasia.

## Comment

Women under the age of 20 years constituted a small minority of those attending the colposcopy clinic. This mainly reflects the small number of women of this age group who were screened. During the period of the study 46/1000 smears in girls under the age of 20 years were abnormal (range 41/1000 in 1982 to 69/1000 in 1985), the pick up rate for all ages being 65/1000 during that period (personal communication M Colquhoun, department of cytopathology, University of Edinburgh). This is two to three times the pick up rate reported by Sadeghi.<sup>5</sup> It is also of interest that in our study over half the patients had evidence of cervical human papillomavirus infection and that 68% of patients with external genital warts also showed cervical intraepithelial neoplasia. Significantly, two thirds of patients with vulval warts and normal findings on cervical cytology had cervical intraepithelial neoplasia, koilocytosis, or both. It is difficult to escape the conclusion that cervical screening may not be detecting all precancerous lesions and that patients with external

genital warts should have colposcopic assessment even if their cervical cytology is reported as normal.

The discovery of premalignant lesions of the cervix in increasing numbers of teenagers is worrying. While none of our teenagers had invasive disease, 25% of the whole group (31% of those with abnormal cervical cytology) had cervical intraepithelial neoplasia grade III, which supports a policy of especial vigilance in this group and suggests that the onset of cervical screening should start from an earlier age than currently recommended.

- 1 Roberts A. Cervical cytology in England and Wales 1965-80. *Health Trends* 1982;14:41-5.
- 2 Patterson MEL, Peel KB, Joslin CAF. Cervical smear histories of 500 women with invasive cancer in Yorkshire. *Br Med J* 1984;289:896-8.
- 3 Department of Health and Social Security. *Health services development. Screening for cervical cancer*. London: DHSS, 1984 (HC 84 (17).)
- 4 Intercollegiate working party on cervical cytology screening. *Report*. London: Royal College of Obstetricians and Gynaecologists, 1987:8.
- 5 Sadeghi SB, Hsieh EW, Gunn SW. Prevalence of cervical intraepithelial neoplasia in sexually active teenagers and young adults. *Am J Obstet Gynecol* 1984;148:726-9.

(Accepted 14 March 1988)

## Relation between falciparum malaria and HIV seropositivity in Ndola, Zambia

Oscar O Simooya, Rosemary M Mwendapole, Seter Siziya, Alan F Fleming

### Tropical Diseases

Research Centre, PO Box 71769, Ndola, Zambia

Oscar O Simooya, MSC, senior scientific officer, clinical pharmacology department  
Rosemary M Mwendapole, MSC, scientific officer, immunology department  
Seter Siziya, MSC, biostatistician  
Alan F Fleming, FRCPATH, deputy director (research)

Correspondence and requests for reprints to: Dr O O Simooya, Department of Therapeutics, Royal Hallamshire Hospital, Sheffield S10 2JF.

AIDS and the human immunodeficiency virus (HIV) have now been documented in Zambia.<sup>1</sup> This development poses a formidable challenge to health authorities in a country where several other illnesses, chiefly malaria, continue to cause great morbidity and mortality. Our main objective was to determine whether infection with HIV increases the risk or severity of infection with falciparum malaria in patients aged 12 and above.

### Patients, methods, and results

The study was conducted at the Ndola Central Hospital in January 1987. Patients aged 12 and above presenting with symptoms suggestive of malaria were included. Symptoms included fever, chills, rigors, headaches, joint pains, myalgia, acute diarrhoea, and vomiting. None had manifestations of AIDS.

Each patient was screened for malaria parasitaemia,

hybrid of p24 and gp41 of HIV (Hoffman La Roche) as antigen.

Altogether 172 patients were studied. Two infected with *P. malariae* were excluded from the analysis. Of the remaining 170 (107 males, 63 females), 67 (39%, 95% confidence interval 32.06 to 46.75) had falciparum malaria. Twenty eight (18 males, 10 females) (17%, 95% confidence interval 10.80 to 22.04) were positive for HIV antibody. Parasitaemia was less common among those with HIV antibodies than among those without (8 out of 28 (29%) v 59 out of 142 (42%), respectively), but the difference was not significant (table). The log<sub>e</sub> mean parasite density in blood slides showing parasitaemia was higher in patients who were negative for HIV antibody than in those who were positive for HIV antibody, but the difference was not significant (log<sub>e</sub> mean difference 2.43, SE 1.4113; p<0.10). Sixty three of the 67 (94%) patients with parasitaemia and 74 of the 103 (72%) without had considerable antibody titres to *P. falciparum*. No significant differences existed in antibody titres to *P. falciparum* in patients who were positive for HIV antibody and in those who were negative whether or not they had parasitaemia.

### Comment

Our study was conducted during the season of malarial transmission, so the rate of parasitaemia of 39% was expected. The proportion of patients positive for HIV antibody (17%) was similar to that found among febrile patients.<sup>1</sup> The prevalence of malarial parasitaemia in patients with HIV antibodies was lower than that in patients without such antibodies, and differences in densities of parasites also did not provide evidence of increased susceptibility to malaria in patients infected with HIV.

A significant association between malaria and infection with HIV has been suggested<sup>2</sup> but is now thought to have been due to many false positive results with earlier ELISAs and to difficulties in interpreting Western blots.<sup>3</sup> The Wellcozyme immunoassay is newer and 100% specific<sup>4</sup> (R M Mwendapole *et al*, second international symposium on AIDS and associated cancers, Naples, Italy, 1987). Our results showed no cross reaction between the antibody to *P. falciparum* by the indirect fluorescent antibody technique and the HIV antibody by the Wellcozyme immunoassay nor were false positive results with the Wellcozyme immunoassay associated with malarial parasitaemia.

Numbers of patients with and without parasitaemia with antibodies to HIV and *P. falciparum*

P. falciparum antibody	Patients with parasitaemia (n=67)		Patients without parasitaemia (n=103)		Significance	
	HIV positive (n=8)	HIV negative (n=59)	HIV positive (n=20)	HIV negative (n=83)	$\chi^2$	p Value
Positive	7	56	13	61	0.00	0.97
Negative	1	3	7	22	0.23	0.60

specific malarial antibodies, and HIV antibodies. Parasitaemia was determined by examining blood films stained with Giemsa under a light microscope and titres of antibody to *Plasmodium falciparum* by an indirect fluorescent antibody technique. HIV antibody was determined with the Wellcozyme immunoassay (Wellcome). All serum samples that gave positive results were retested, and if positive results were found again the samples were tested in an enzyme linked immunosorbent assay (ELISA) that used a bacterially synthesised polypeptide homologous with a