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.[5] 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.

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Relation between falciparum malaria and HIV seropositivity in Ndola, Zambia

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AIDS and the human immunodeficiency virus (HIV) have now been documented in Zambia.[1] 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, 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 hybrid of p24 and gp41 of HIV (Hoffman La Roche) as antigen.

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

	Patients with parasitaemia (n=67)		Patients without parasitaemia (n=103)		Significance	
P falciparum antibody	HIV positive (n=8)	HIV negative (n=59)	HIV positive (n=20)	HIV negative (n=83)	χ^2	p Value
Positive	7	56	13	61	0·00	0·97
Negative	1	3	7	22	0·23	0·60

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 $\log_e$ 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 ($\log_e$ mean differencee 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.[1] 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[2] but is now thought to have been due to many false positive results with earlier ELISAs and to difficulties in interpreting Western blots.[3] The Wellcozyme immunoassay is newer and 100% specific[4] (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.

There was no apparent failure of the humoral response to malaria associated with infection with HIV, but as we observed only patients aged 12 and above a study of the acquisition of immunity in infants positive and negative for HIV antibody might be of interest, as would a study in patients with terminal AIDS. Twenty patients had symptoms suggestive of malaria but gave negative results for parasites and positive results for HIV antibody. This suggests that many patients with HIV infection may be presenting with an illness similar clinically to malaria before AIDS related complex or AIDS is recognisable.

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Does low entry of cystic duct predispose to stones in the common bile duct?

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In patients undergoing endoscopic papillotomy for stones in the bile duct the cystic duct often seems to enter the bile duct low down from the left (see fig (*a*)). To substantiate this impression the site of entry of the cystic duct in patients with stones in the bile duct was compared with that in patients with stones in the gall bladder and that in a group of control patients.

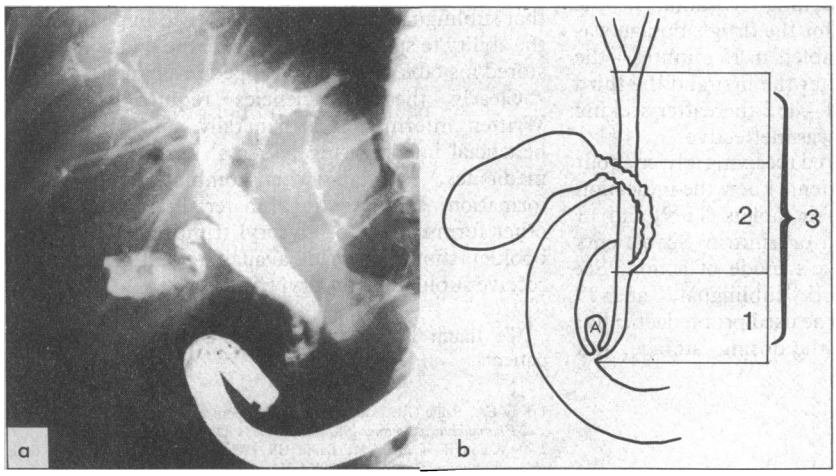
Patients, methods, and results

The position of the entry of the cystic duct into the common hepatic duct was studied in a consecutive series of 50 patients with stones in the bile duct by reviewing endoscopic retrograde cholangiograms. Sixteen patients had a cholecystectomy; associated stones were seen in 22 of the 34 with intact gall bladders. These results were compared with the routine operative cholangiograms of 50 patients with stones in the gall bladder but no evidence of stones in the bile duct and with those of 50 control patients with abdominal pain and normal results from endoscopic retrograde cholangiopancreatography.

The figure (*b*) shows the segments of the bile duct measured. To overcome discrepancies due to the type of cholangiogram distances from the ampulla to the entry of the cystic duct (segment 1) and the contiguous segment of the cystic duct (segment 2) were expressed as ratios of the total length of the bile duct (segment 3). Periampullary diverticula were also documented. The unpaired Student's, χ^2, and Fisher's exact tests were used for statistical analyses when appropriate.

The mean age of the group with stones in the bile duct was 65 (SD 16), which was higher than that of the group with stones in the gall bladder (52 (13·2)) and that of control patients (47 (15·9)) ($p<0·001$ in both cases). The group with stones in the bile duct contained more men than the group with stones in the gall bladder (n=24 and 10, respectively; $p<0·001$).

The ratio of segments 1 to 3 was significantly lower in the group with stones in the bile duct, being 0·28 (0·20) compared with 0·55 (0·16) in the group with stones in the gall bladder and 0·54 (0·19) in the control group ($p<0·001$ in both cases). Conversely, the ratio of segments 2 to 3 was significantly higher in the group with stones in the bile duct, being 0·43 (0·15) compared with 0·21 (0·14) in the group with stones in the gall bladder and 0·21 (0·15) in the control group ($p<0·001$). Low entry of the cystic duct was defined as less than 3·5 cm from the ampulla and was more common in the group with stones in the bile duct (n=28) than in the group with stones in the gall bladder or in the control group (n=12 and 5, respectively; $p<0·005$). Ampullary diverticula were also significantly more common among those with stones in the bile duct (17 out of 50) than among control patients (three out of 50) ($p<0·001$), but no clear association was found between ampullary diverticula and low entry of the cystic duct. The combination of a left sided and low entry of the cystic duct into the bile duct was more common in patients with stones in the bile duct (17 out of 50) than in those with stones in the gall bladder (three out of 50) ($p<0·001$) or those in the control group (four out of 50) ($p<0·003$). This combination was noted in all nine patients aged less than 30 and in all five black patients (mean age 42, range 22-52) with stones in the bile duct in our total experience with bile duct stones.



(a) *Left sided entry of cystic duct at level of ampulla of Vater.* (b) *Measurements of segments of bile duct: 1 ampulla of Vater to entry of cystic duct, 2 contiguous segment of cystic duct and common hepatic duct, and 3 total length of bile duct. A=Ampullary diverticulum*

Comment

Our study shows that stones in the bile duct are commonly associated with a low and often left sided entry of the cystic duct into the bile duct. The pathogenetic relevance of this is reinforced by the invariable finding of this anatomical variant in young and in black patients, in whom stones in the bile duct are otherwise rare. Although the mechanism for the formation of such stones is uncertain, stasis with colonisation and the formation of calcium bilirubinate stones is probable.[1,2] Alternatively, low entry of the cystic duct may lead to increased retrograde pressure