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.

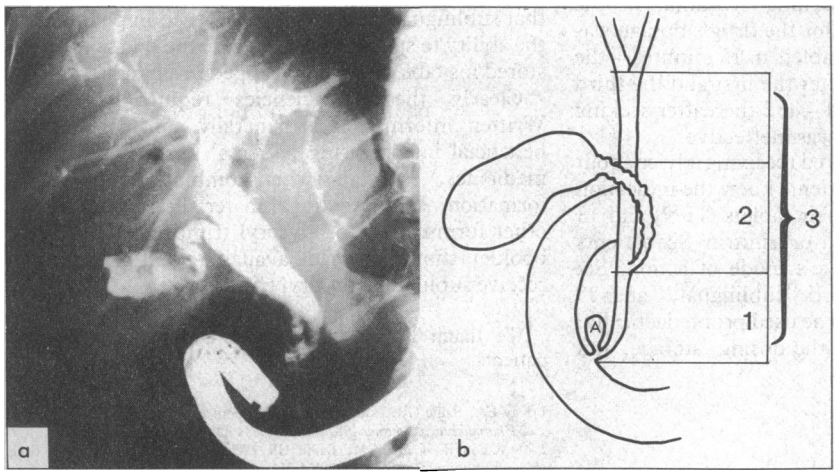
Patients, methods, and results

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

with gradual dilatation of the cystic duct and migration of stones from the gall bladder.[3]

There are several clinical implications. The long contiguous course of the cystic duct and common hepatic duct could explain why surgeons sometimes inadvertently leave a long remnant of cystic duct, which is reputedly a cause of the postcholecystectomy syndrome.[4] Furthermore, the migration of stones from the gall bladder into the contiguous segment may explain transient episodes of jaundice and, with more severe impaction of stones, cause persistent obstructive jaundice, the so called Mirizzi syndrome.[5]

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Patients' knowledge of sublingual glyceryl trinitrate

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Glyceryl trinitrate has been used to treat angina pectoris for many years, yet no formal studies have established patients' understanding of its use. We showed that an information booklet can educate patients about sublingual glyceryl trinitrate,[1] and we report a study to determine patients' knowledge of this drug.

Patients, methods, and results

We designed a questionnaire to assess inpatients' knowledge of their prescribed glyceryl trinitrate. Questions were included about how glyceryl trinitrate works, dosage, how to take and store it, side effects, and what to do should side effects occur. Fifty patients, 28 men (mean age 62 (SD 11·6) years) and 22 women (mean age 67·4 (12) years), were studied. The mean time of treatment with sublingual glyceryl trinitrate was 5·5 years (range one week to 12 years).

Only one of us (EAK) collected data from the questionnaire. Correct answers scored one point and incorrect or "don't know" responses none. Two questions required multiple answers. A maximum score of six points was awarded for knowing how to take a tablet correctly, one point being given for each of tipping some tablets into the bottle cap, selecting one; sitting down or standing still for a moment; placing one tablet under the tongue; not eating, drinking, or smoking while taking the drug; and replacing the cap of the bottle tightly. A maximum of four points was awarded for side effects, one for each of headache, flushing, dizziness, and burning sensation in the mouth. The correct answer for the drug's dosage was taking a maximum of three tablets in 15 minutes—the second tablet five minutes after the first and the third five minutes after the second—and thereafter seeking medical help if this regimen was ineffective.

Only 15 patients remembered receiving advice about their tablets. Forty seven patients knew the indication for their use. Most called their tablets GTN, and 13 also knew them as either TNT or trinitrin. Six patients understood glyceryl trinitrate's mode of action. Six patients understood the word "sublingual," and 25 knew that these tablets could be used prophylactically. The patients' knowledge of the dosing, storage, and side effects was poor (table).

Patients' knowledge of administration, dose, storage, and side effects of sublingual glyceryl trinitrate (n=50)

Knowledge tested	No of patients giving correct responses
Administration* and dose:	
Time to onset of action	22
Duration of action	2
Action if first dose ineffective	31
When to take second dose	7
Maximum dose over 15 minutes	6
Action if three doses ineffective	38
Storage:	
Store in glass container	24
Reason for storing in glass	9
Storage conditions required	14
Reason for storage conditions	9
How often to renew supply of tablets	25
Side effects:	
Whether tablets produce side effects	26
Knowing one or more side effects	21
How to avoid headache	2
How to avoid dizziness	1

*Fifty patients knew a mean of 3·0 (SD1·0) of six points about taking tablets correctly.

Comment

Patients showed a depressing lack of knowledge of their drug treatment, and many did not know how to take sublingual glyceryl trinitrate tablets correctly. Only 62% knew what to do if the first tablet was ineffective; the remainder said that they would either call an ambulance or their doctor, neither of which is appropriate. Most patients (88%) did not know the maximum dose and some thought that it was more than eight tablets. The maximum dose is not on the label and patients must be told it by their doctor or pharmacist. That patients are informed about the maximum dose, however, should not be assumed.[2] The mean score for taking the tablets correctly was 3·0, which indicates a severe lack of knowledge. Labels on bottles containing glyceryl trinitrate tablets give an expiry date of eight weeks after the bottle is first opened, but only half of the patients knew this. Finally, the patients' anecdotal statements typified their poor understanding: one patient thought that the tablets caused an explosion in blood vessels, two said that sublingual meant having a speech impediment or the ability to speak two languages, and one said that he stored his tablets loosely wrapped in a handkerchief.

Clearly these deficiencies require correction. Written information is generally considered to be beneficial in increasing patients' knowledge of their medicines,[3] especially when combined with oral information. As instructional materials are available for other formulations of glyceryl trinitrate so a suitable booklet[1] should be made available to all patients who receive sublingual glyceryl trinitrate.

We thank Dr A Bernstein for allowing access to his patients.

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