

Pen torch test in patients with unilateral red eye <i>N V H Chong and P I Murray</i> 259	Osteopathy <i>M J B Wilkinson</i> 261	Stress and doctors <i>Paul McDonald</i> 263
Care of patients with schizophrenia <i>Tony Kendrick</i> 259	Colour blindness in doctors <i>John D Fletcher</i> 262	Hypoglycaemia and human insulin <i>M S Hall</i> 263
Urine sampling technique <i>Peter Curtis, et al</i> 260	General practice in deprived areas <i>David Sowden; Bernita Lloyd</i> 262	Note to authors of letters: Please note that all letters submitted for publication should be typed with <i>double spacing</i> . Failure to comply with this may lead to delay in publication.
Journal publication times <i>Geoffrey J Robinson; Editor's reply</i> 261	James Mackenzie <i>James McCormick</i> 262	

Pen torch test in patients with unilateral red eye

Sir,

A red eye often presents a diagnostic problem in general practice and it is important to identify those conditions which require ophthalmic referral. The presence of pain, visual loss and unequal pupil size usually indicates more serious eye conditions.^{1,2} Nevertheless, distinguishing between mild and serious ocular problems can sometimes be difficult. A simple pen torch test was designed to assist in such situations. If photophobia can be induced by a relatively minor light source it may be an indication of more significant ocular inflammation.

A pilot study of the test was undertaken among 100 adult patients who presented to the accident and emergency department at the Birmingham and Midland Eye Hospital with non-traumatic unilateral red eye. Prior to ophthalmic examination, a standard pen torch powered by two AAA batteries was shone directly into one eye from a distance of 15 cm for two seconds. If the patient reported that any, including minimal, additional discomfort had been induced, the test was taken to be positive. The test was then repeated for the other eye. A randomization list was used to decide which of the two eyes would be tested first. An ophthalmic examination was then performed and the patients divided into two groups — those with mild eye conditions and those with serious eye conditions. Each group comprised patients with three diagnoses. Statistical analysis was performed using the chi square test.

The results of the study are summarized in Table 1. For the group of patients with serious eye conditions the test was positive in 68% of cases compared with only 5% in the group with mild eye conditions ($\chi^2 = 43.2, P < 0.001$). No positive results were obtained when the light was shone in the contralateral, unaffected eye. There was no association between age and a positive test result. The pen torch test was able to detect 95% of patients without serious eye diseases (specificity) and 68% with serious eye diseases (sensitivity).

Using these results, the probability of having a serious eye condition given a positive test is 88% (predictive value of positive test).

A positive test result could not be explained by pupillary spasm alone as the light reflex is consensual, therefore, a positive result would have been expected when the light was shone in the contralateral, unaffected eye. Glare, secondary to reduced clarity of the media, may have a role to play in the response.

A survey drawn from an ophthalmic accident and emergency department might be biased towards more severe or partially treated eye diseases. Nevertheless, these results suggest that the pen torch test could complement existing examination techniques and be an aid in distinguishing between mild and serious ocular problems. A similar study in the general practice setting would be interesting.

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Care of patients with schizophrenia

Sir,

Many people with schizophrenia lose contact with psychiatrists after hospital discharge.¹ General practitioners are usually involved in their psychiatric, as well as physical, care.² Heavy smoking, drug side effects and self neglect combine to increase physical illness in schizophrenia.³ Such patients cannot always be relied upon to present themselves for care appropriately.

Table 1. Pen torch test results for 100 patients with non-traumatic, unilateral red eye.

Diagnosis	No. of patients		Median age (years)
	Positive test	Negative test	
<i>Mild eye conditions</i>			
Subconjunctival haemorrhage	0	10	65
Conjunctivitis	3	48	39
Episcleritis	0	5	41
Total	3	63	41
<i>Serious eye conditions</i>			
Keratitis	8	5	44
Anterior uveitis	14	6	48
Angle closure glaucoma	1	0	60
Total	23	11	48

The care of patients with schizophrenia in one general practice, with a list size of 9800 and with three full-time and four job-sharing partners, was reviewed. Computer diagnostic entries and psychotropic drug prescriptions identified 29 schizophrenic patients (15 men and 14 women, mean age 46 years, range 22 to 78 years).

The care of patients was assessed against the following criteria—continuity: each patient should see their own doctor each time they consult; regular contact: each patient should be seen by their doctor at least six-monthly; structured review: each patient should be reviewed regularly, for physical, mental, and social needs; preventive care: schizophrenic patients should be offered the same preventive care as other patients; and drug review: use of major tranquillizers should be reviewed by a psychiatrist every two years. Practice records of patients with schizophrenia were compared with a control sample without mental illness, matched for age, sex and registered doctor.

For schizophrenic patients, 72% of entries were in their own doctor's handwriting, compared with 59% for controls.

Of the schizophrenic patients 86% had been seen within six months, and 97% within 12 months, compared with 69% and 76%, respectively, for the controls.

There were 15 serious physical problems (including congestive heart failure, epilepsy, chronic obstructive airways disease, and an un-united fracture) and 29 non-serious problems (including varicose veins and arthritis) identified among the schizophrenic patients, compared with seven serious and 16 non-serious problems among the controls. Of the schizophrenic patients, 76% were on oral psychotropic drugs and 41% were receiving antipsychotic medication by depot injection. Despite this, there were few recordings of mental state (short comments in the notes of five schizophrenic patients). Employment was recorded for 26 out of 29 patients in each group: five patients with schizophrenia were in employment outside the home compared with 18 controls. There was virtually no record of financial problems or benefits received in either group (financial problems were recorded for two schizophrenic patients; there was no record of benefits received).

Risk factor recording, apart from cholesterol level, was good in both groups (Table 2). However, there was no evidence of action taken to reduce risk factors among the schizophrenic patients.

Of the schizophrenic patients 24% had seen a psychiatrist within the last two years, and 38% were in contact with the community psychiatric nurse.

We intend to improve the care of patients with schizophrenia in the areas of

continuity, recording of mental and social problems, modification of risk factors, and specialist drug review. A recall system has been introduced together with special record cards for patients with schizophrenia which have a grid of possible problems to be explored every six months (copies are available on request).

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Urine sampling technique

Sir,

Over the past three years our family practice residency training programme has organized a weekly critical appraisal seminar attended by residents (trainees), teaching practitioners and any other interested people. The seminar deals with one or more particular medical articles which

are likely to have an impact on general practice in terms of diagnosis, prognosis and management.

Recently we held a session on a *Journal* article on urine sampling techniques.¹ The message from Baerheim and colleagues was that holding the labia apart was an effective way of obtaining a clean specimen, and that using the midstream technique and cleaning the perineum added little to reducing the contamination rate. Since the practice processes about 142 specimens a month, the relevance to our practice was considerable, and it was decided to implement the suggestions from the study. In the changed preparation technique, women were instructed simply to part the labia while obtaining the specimen and not to use the benzalkonium chloride pads that were part of the standard cleansing procedure used normally.

Over a two day period, 22 urine samples were collected of which eight were from obstetric patients. Both analysis and culture were carried out for 11 specimens. Of the 22 samples 12 (55%) were grossly contaminated by vaginal elements (debris, cellular material) and of the 11 culture specimens eight (73%) were similarly contaminated. Patients with contaminated specimens had to be recalled for a repeat sample and culture, and the practice had to absorb the cost of doing this. The contamination rate for urine specimens collected during a one month period before the intervention was 12.4% (in 185 specimens) and during a one month period after the intervention ended it was 14.7% (in 177 specimens).

Reasons for the poor outcome in our study are first, that women might vary greatly in their ability to spread the labia and obtain a urine specimen, particularly if they were overweight or had objections to touching themselves, and secondly obstetric patients may have great difficulty performing the procedure, especially in the third trimester. In Baerheim and colleagues' study, the subjects were healthy women college students studying nursing or medical technology, a group likely to have an athletic shape, manual dexterity and a bias towards success in a medical procedure — their mean age was 22.6 years and their mean weight 61.3 kg. Our practice sees a much greater variety of patients including women who weigh up to 100 kg. Though the technique recommended seems simple and the average healthy woman may be able to perform the procedure with little difficulty, it seems inappropriate for obese or pregnant or frail, elderly women.

Though Baerheim and colleagues' study was relatively well designed and was relevant to general practice, it has

Table 2. Risk factors recorded among schizophrenic and control group patients.

	No. of schizophrenic patients			No. of control patients		
	Factor recorded	Problem found	Evidence action taken	Factor recorded	Problem found	Evidence action taken
Blood pressure (within 5 years) (n = 29/29)	26	2	0	24	4	2
Smoking (ever) (n = 29/29)	24	12	0	21	4	2
Alcohol (ever) (n = 29/29)	17	2	0	17	1	0
Weight (ever) (n = 29/29)	19	4	0	19	2	1
Cholesterol level(ever) (n = 25/25) ^a	4	0	—	2	1	1
Cervical smear (within 3 years) (n = 8/10)	7	0	—	10	0	—
Mammography (ever) (n = 7/7)	4	0	—	3	0	—

n = no. of schizophrenic/control group patients eligible for inclusion. ^a Patients over 65 years of age not considered eligible.