to bias attendance in favour of women. However, they also clearly demonstrate that in order to obtain a reasonable coverage, definite appointment times should be included in invitation letters, although doing so incurs a cost to the practice of a greater proportion of patients failing to attend their appointment without prior notification and so leaving appointment times unfilled. One response to this problem may be to slightly overbook screening clinics.

P NORMAN

MRC/ESRC SAPU
PO Box 604, The University
Sheffield S10 1FP

M T CONNER

Department of Psychology
The University, Leeds LS2 9JT

D G WILLITS
D R BAILEY
D H J HOOD
H L COYSH

Staithe Surgery
Stalham, Norwich NR12 9BU

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Measurement of capillary cholesterol level in hyperlipidaemia

Sir,
The Reflotron (Boehringer) dry chemistry method of measuring capillary cholesterol level is being used more frequently in general practice. This method has been validated for screening large numbers of people by minimally trained staff.[1-3] We used this method to monitor the cholesterol levels of hypertensive patients with hyperlipidaemia who were attending an outpatient clinic in a trial of intensive dietary intervention. It was considered suitable as it would provide patients and staff with immediate feedback of current cholesterol values.

A capillary sample from the patient's finger taken using an automatic lancet and a venous sample from the antecubital vein taken by conventional venepuncture were obtained from 141 patients by two trained nurse practitioners. The venous blood samples were sent to the biochemistry laboratory for full lipoprotein analysis including total plasma cholesterol level. A total of 489 pairs of Reflotron-tested capillary samples and laboratory-tested venous samples were obtained over a 15 month period.

Assessment of the two nurses taking samples from different patients revealed that there was no statistically significant difference between the results obtained by them for capillary cholesterol or venous cholesterol level, or in the difference between the two tests. The Reflotron-tested capillary values were found to be higher than the laboratory tested venous values by a mean of 0.3 mmol l^{-1}, standard deviation (SD) 0.8 mmol l^{-1}.

Over the course of the study, efforts were made to improve the accuracy and precision of the Reflotron results. Staff technique was observed and reviewed on a number of occasions by the company representative. The Reflotron machine was changed after seven months and we participated in an external quality assessment scheme for the Reflotron.

The overall correlation coefficient (r) for the Reflotron capillary cholesterol versus the laboratory venous cholesterol was 0.725. The two Reflotron machines used yielded different values, with the first giving $r=0.809$ and the second $r=0.798$. The first machine had a non-significant bias of -0.1 mmol l^{-1} (SD 0.6), and the second a statistically significant bias of $+0.6$ mmol l^{-1} (SD 0.7, $P<0.001$). Using a difference of 1 mmol l^{-1} between visits to represent a change, 25% of patients at visit 2, 33% of patients at visit 3 and 36% of patients at visit 5 would have been given different information on their progress depending upon whether Reflotron or laboratory results were used to provide feedback. In the majority of cases of discrepant findings results had been obtained from the same Reflotron machine on both occasions.

The Reflotron models used in our study were not sufficiently accurate or consistent to assess changes in a patient's cholesterol levels over time. The results of the study therefore suggest that measuring capillary cholesterol by the Reflotron method is not useful for monitoring long-term responses to drugs and diet in hyperlipidaemic patients.

JOAN L CURZIO
CATHERINE HOWIE
SUSAN KENNEDY
JOHN L REID

Department of Medicine and Therapeutics
University of Glasgow, Western Infirmary
Glasgow G11 6NT

ELIZABETH FARISH
JUDITH BARNES

Biochemistry Laboratory
Stobhill General Hospital, Glasgow G21 3UW

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Cryotherapy ineffective for ingrowing toenails

Sir,
Ingrowing toenails are a common painful condition. A paper in the *British Medical Journal* in 1985 reported that liquid nitrogen cryospray was a quick, simple and cheap outpatient procedure comparable with other nail sparing techniques.[1] In this study 44 patients received treatment, 20 with a good result. However, in 24 patients the condition recurred within one year; six of these cases responded to a second treatment. Cryotherapy was given for 30 seconds after the ice field had formed and Dermovate-NN® (Glaxo) and aspirin were used to treat pain and swelling.

As a survey in Devon and Cornwall had shown that 58 out of 265 practices had access to liquid nitrogen,[2] I attempted to replicate this study in primary care. Twenty patients were admitted to the study at the Lakeside health centre in London. An 8600 Cryo-Jet® (Cryo-Technology) cryospray device was used but neither aspirin nor Dermovate-NN® were added to the treatment regimen. The first three patients found the treatment unacceptably painful and thus local anaesthetic ring blocks were used for the remaining 17 patients. This allowed very adequate freezing of the soft tissues. Despite this, the condition recurred in 15 out of the 20 patients. In some of these cases nail spicule removal had been carried out. The technique was abandoned and has been totally superseded in this practice by phenolic cauterization of the nail bed.[3] This technique is now regarded as the best method for treating ingrowing toenails although nail bed ablation is part of the procedure.

I believe that cryotherapy spray for ingrowing toenails is painful, ineffective and wasteful and should not be recommended.

NIGEL MASTERS

Lakeside Health Centre
Tavy Bridge
London SE2 9UQ

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Premenstrual syndrome

Sir,

Premenstrual syndrome was first described in 1931 by Frank, who ascribed the symptoms to an excess of oestrogen and treated women with oophorectomy.[1] Premenstrual mood and physical changes are present to some degree in most women secondary to the endocrine changes of the menstrual cycle especially just prior to menstruation. In 5–10% of women these changes are severe and consist of bloating and oedema (fluid retention), headaches, breast pain and swelling, change in bowel habit, mood change, irritability and depression.[2] Doubt remains about the pathophysiology of premenstrual syndrome and its relationship with biological, psychological and social phenomena.

The syndrome is most commonly reported by women in the fourth decade and is associated with greater parity, stress and lack of exercise. Management often remains empirical, including counselling about hormonal changes, diet, exercise, lifestyle and suppression of ovulation. Sympathy and understanding are crucial, together with support from husband, family, friends and general practitioner. Treatment is difficult because the symptoms are often aggravated by underlying problems such as stress or family disharmony, or may be superimposed upon pre-existing psychiatric or psychological disorders.

In my practice, which has 9974 patients and 2628 women aged 18–56 years, 76 women with a current, active diagnosis of premenstrual syndrome have been identified. Their median age is 38 years (mean 37 years; range 18–56 years with a peak in the age range 32–47 years). Almost all are receiving some form of treatment, most commonly progesterones and/or pyridoxine. Ten women are receiving two drug treatments.

Taylor and colleagues reported that a neurotic subgroup of women in the childbearing age are more likely to report premenstrual changes than stable women.[3] Of the 76 women in my practice 35 (46%) have documented episodes of clinical (often recurrent) depression and of these 24 have received antidepressants, most commonly tricyclic antidepressants. Furthermore, 30% of the women have documented evidence of marital problems including four who have suffered physical abuse by their husbands.

Treatment for these women is at best empirical and often placebo. Many women presenting with symptoms of premenstrual syndrome are depressed or suffering psychosexual or marital disharmony. Such women may be more prone to this syndrome or may present with acceptable or fashionable premenstrual symptoms in an attempt to seek help for interpersonal problems. These women must be given the opportunity to discuss their underlying concerns. Only when these are identified can specific and constructive management be arranged.

ANDREW N ALLAN

Health Centre
Midland Street
Long Eaton
Nottingham NG10 1NY

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Management of chlamydial cervicitis in general practice

We read with interest the article by Owen and colleagues (July *Journal*, p.279) on the management of chlamydial cervicitis in general practice and wish to comment on some of their conclusions.

We feel that women diagnosed as infected with *Chlamydia trachomatis* should be referred to a department of genitourinary medicine wherever possible, for several reasons. First, such departments possess special expertise in contact tracing. Optimal contact tracing comprises a great deal more than merely advising the patient to inform her sexual partner(s) of the need to seek medical advice. It necessitates taking a careful sexual history, discussing with the patient how best to inform her partners and issuing contact slips for the contacts to present to the physicians whom they consult. In cases where the patient feels unable to inform her contacts directly, the health adviser may do so by telephone, letter or a home visit. Full contact tracing can seldom be achieved on a single occasion. It often requires multiple interviews with the patient to reinforce the importance of notifying sexual partners. It may be necessary to communicate with other departments and physicians in order to establish whether the contacts have attended. In departments of genitourinary medicine this process is carried out by full-time, experienced health advisers.

As the authors state, there is a regrettable paucity of hard evidence concerning the effectiveness of contact tracing for chlamydia in genitourinary medicine departments in the United Kingdom. However, it is important to realize that their paper contains no information about the effectiveness of contact tracing. A study in the United States of America has shown that field follow up by disease intervention specialists (health advisers) is much more effective in getting partners to attend than contact slip notification or patient notification.[1]

Secondly, a further benefit from referral will be comprehensive screening for coexistent sexually transmitted diseases. Although quite extensive microbiological tests were carried out in this study (not all of which are available to all general practitioners), there were deficiencies, for example in not testing for gonorrhoea at sites other than the cervix (urethra, rectum, pharynx), in not performing serological tests for syphilis and in not offering human immunodeficiency virus (HIV) antibody testing.

Thirdly, antigen detection tests for chlamydia do produce false positive results. The authors quote a paper by Stamm[2] as stating that the MicroTrak (Syra) test has a specificity of 97%. However, the same paper gives the positive predictive value of this test as only 79% in an intermediate prevalence population (the difference arises because the positive predictive value of a test is affected not only by the specificity of the test but also by the prevalence of the condition in the population studied). This means that around one in five of the women with a positive result will be incorrectly diagnosed as having a sexually transmitted disease. The distress this may cause can be readily appreciated and may be avoided by referral to a department of genitourinary medicine with access to tissue culture for chlamydia by way of confirmation.

It should also be noted that no conclusions can be drawn from this study as to the comparative effectivenes of managing cervical chlamydial infection in general practice as against a department of genitourinary medicine, since no comparison was made. The authors quote results of previous studies which showed similar re-isolation rates for chlamydia after treatment. However, they might also have referred to other studies conducted in genitourinary medicine departments which had substantially lower re-isolation rates of between 0% and 3%.[3-5]