treatment, compared with five (29%) patients who used alcohol moderately or not at all ($\chi^2=18.09$, $df=1$, $p<0.001$). Two of the five moderate drinkers who continued to have attacks of gout had raised γ -glutamyltransferase activity (71 and 141 U/l; normal range <36).

Comment

The Arthritis and Rheumatism Council's information booklet on gout states that gout is probably the most easily treated form of rheumatic disease.⁴ In our study this statement was largely true for the moderate drinkers and those who took no alcohol: only five of the 17 (29%) had regular attacks of gout while receiving treatment. Two of these patients may have had a fairly high alcohol intake as their γ -glutamyltransferase activity was raised. Despite treatment with allopurinol and non-steroidal anti-inflammatory drugs 20 of the 21 heavy drinkers continued to have attacks of gout.

Median (range) clinical and laboratory variables in patients with gout

	Heavy alcohol intake (n=21)	Moderate or no alcohol intake (n=17)
Age (years)	51 (26-67)	54 (48-84)
Sex (M:F)	21:0	14:2
Body weight (kg)	77 (64-97)	80 (61-92)
Duration of gout (years)	5 (2-16)	4 (1-14)
No taking a diuretic	3	5
No taking allopurinol (300 mg daily at time of assessment)	19	14
No taking a non-steroidal anti-inflammatory drug	19	16
Mean cell volume (fl)	96 (89-107)	92 (84-104)*
γ -Glutamyltransferase (U/l)	125 (51-572)	52 (10-141)**
Aspartate aminotransferase (U/l)	39 (14-193)	26 (19-43)
Alanine aminotransferase (U/l)	34 (13-153)	23 (11-75)*
Uric acid (μ mol/l)	500 (230-770)	330 (170-600)**
Creatinine (μ mol/l)	85 (65-370)	100 (75-180)

* $p<0.05$, ** $p<0.001$, Mann-Whitney U test.
Normal ranges—cell volume 78-96 fl; γ -glutamyltransferase <36 U/l; aspartate aminotransferase 12-48 U/l; alanine aminotransferase 3-55 U/l; uric acid 170-460 μ mol/l (men), 110-370 μ mol/l (women); creatinine 50-120 μ mol/l.

The poor response to treatment that was seen in the heavy users of alcohol may have been due to antagonism of the effect of allopurinol, as ethanol contributes to hyperuricaemia both by increasing production of uric acid and by impairing its excretion in the urine.⁵ Poor compliance is another possible explanation of the poor response. In two outpatients uric acid concentrations were 680 and 770 μ mol/l despite treatment with 600 mg allopurinol daily; when these patients were admitted to hospital, however, uric acid concentrations fell rapidly to normal although the patients took only 300 mg allopurinol daily. This suggests that the failure of response had been due to failure to take the drug.

A continued high alcohol intake was associated with an impaired response to treatment of gouty arthritis. Though counselling on reducing alcohol intake was invariably given, it was obviously ignored by the heavy drinkers and management of these patients was a considerable problem. Failure of patients with gouty arthritis to respond to treatment should alert their doctors to the possibility of hidden alcohol abuse.

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Virological screening for herpes simplex virus during pregnancy

Studies concerning genital infection with herpes simplex virus during pregnancy have been limited to neonatal morbidity and the frequency of asymptomatic recurrences in American obstetric populations.^{1,3} In the United Kingdom there has been only one report which failed to show asymptomatic viral shedding in a small number of pregnant women with a history of recurrent genital herpes.⁴ There has been no clearly defined policy for screening women at risk of this infection during pregnancy.

In Sheffield we have adopted not only the American practice of screening (from 32 weeks until delivery) women with recurrent disease⁵ but included those who had suffered an initial attack but were free of recurrence before conception and also those whose regular sexual partner had recurrent herpes. It has been our practice to recommend elective caesarean section for all women who have symptomatic or asymptomatic shedding evident within 21 days of the onset of labour.

Patients, methods, and results

All pregnant women attending the department of genitourinary medicine during the study period who fell into the following categories were investigated: (a) those pregnant women presenting with initial genital herpes or who were consorts of men with recurrent genital herpes; (b) those having suffered an initial or recurrent attack of genital herpes before conception. Each woman was screened when possible at 32, 34, and 36 weeks and then weekly until delivery and also during any symptomatic recurrence. On each occasion swabs were taken from the cervix and from any vulval lesion present. These were transported to the laboratory in standard transport medium (viral transport medium No 199) and cultured in human fibroblasts for 14 days.

During 1978-87, 197 women were admitted to the study. All women with genital herpes at term were delivered by caesarean section. These included four women who suffered a recurrence at term after an attack during pregnancy and one who had suffered recurrent disease before pregnancy and who went into premature labour while suffering a recurrence. Among women having suffered initial or recurrent genital herpes before conception eight were delivered by caesarean section for a clinically apparent recurrence at the time of delivery.

In women having an initial attack of genital herpes during pregnancy there was a high probability that caesarean section would be performed. Even when infection occurred before 37 weeks there was a considerable risk of recurrence at term necessitating section (table).

Results of screening for herpes simplex virus during pregnancy and mode of delivery

	Women presenting with an initial attack	Consorts of men with recurrent disease	Women with genital herpes before conception	
			Free of recurrence	With recurrences
No of patients	26	32	77	62
No of pregnancies	26	34	81	71
No (%) having recurrence during:				
1st Trimester (0-12 weeks)	—	—	6 (7.4)	10 (14.1)
2nd Trimester (13-24 weeks)	—	—	7 (8.6)	10 (14.1)
3rd Trimester (25-36 weeks)	—	—	12 (14.8)	24 (33.8)
Term (37-42 weeks)	—	—	6 (7.4)	20 (28.2)
No (%) having initial attack during:				
1st Trimester	4 (15.4)	0	—	—
2nd Trimester	5 (19.2)	0	—	—
3rd Trimester	8 (30.8)	1 (2.9)	—	—
Term	9 (34.6)	4 (11.8)	—	—
No (%) of pregnancies free of recurrence	—	—	61 (75.3)	30 (42.3)
Mode of delivery (No (%)):				
Vaginal	13 (50.0)	29 (85.3)	72 (88.9)	47 (66.2)
Caesarean section for herpes simplex virus	13 (50.0)	4 (11.8)	6 (7.4)	21 (29.6)
Caesarean section for obstetric reasons	0	1 (2.9)	3 (3.7)	3 (4.2)

No other study has considered women who have had only an initial attack of genital herpes before conception. These women were shown in our study to have a significantly smaller risk of recurrence during pregnancy than women with a history of recurrent genital herpes before conception ($\chi^2=17.2$; $df=1$; $p<0.01$). Nevertheless, the risk was still appreciable and not dependent on time since initial infection.

Comment

This study is the first to screen pregnant consorts of men with recurrent genital herpes to assess the outcome in terms of mode of delivery of the

neonate. Despite this group of patients theoretically being highly motivated to prevent the spread of the disease five of the 34 pregnancies were complicated by primary infection with the virus. This suggests that all men with genital herpes should be counselled about the need for screening pregnant consorts, and such couples should be advised either to abstain from sexual contact or to use barrier methods of protection from the third trimester until delivery.

We recommend that all women with a history of genital infection with herpes simplex virus should be screened during pregnancy.

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Screening pregnant women for genital herpes

Neonatal herpes is associated with a high morbidity and high mortality. Nevertheless, only 84 cases were reported in England and Wales between 1981 and 1984.¹ Most infants in whom infection with herpes simplex virus occurs have acquired the virus from the mother's birth canal during delivery.² The risk to the neonate is greatest if the mother is having her first attack at that time. Caesarean section in those with herpes at term, however, has been shown to prevent neonatal herpes.²

In order to detect herpes at term we need to screen women at risk in the obstetric population (those with primary or recurrent herpes and those whose partners have herpes). There is very little information about the use of screening for herpes in pregnancy in the United Kingdom. This study reports on the demographic characteristics, frequency of attacks in pregnancy, and outcome of pregnancy in a group of women who were screened for herpes in pregnancy.

Present study

In 1984 a screening policy for pregnant women at risk of herpes was established in the department of genitourinary medicine. This consisted of a weekly clinical examination and viral culture from the cervix and vulva from 36 weeks of pregnancy until delivery. If at the time of delivery the previous viral culture had been positive or there was clinical evidence of herpes a caesarean section was recommended. In all other circumstances the pregnancy was handled in accordance with normal obstetric practice.

Between 1984 and 1987, 78 women were screened. Their median age was 31 (range 21-41) and 64 were primiparous. One woman had a primary attack at 30 weeks, seven attended because their partners had herpes, and 70 because they were suffering a recurrent attack.

Seventeen of the 62 women with recurrent herpes in whom the outcome of pregnancy was known had a caesarean section because of herpes (table). None of the 25 women without recurrences in pregnancy had a caesarean section compared with six of the 17 with one attack and 11 of the 20 with two or more attacks ($p=0.0003$).

Comment

These findings show that over one fifth of women with recurrent genital herpes will have a caesarean section because of their illness. The more frequent the attacks the more likely the woman is to have a caesarean section. With regard to screening, however, there are several drawbacks, including

Characteristics of women screened for herpes in pregnancy

	Primary herpes (n=1)	Recurrent herpes (n=70)	Herpes in partner (n=7)
No having no or one attack in year before pregnancy	0	21	0
No having no or one attack during pregnancy (excluding delivery)	1	24	0
No with herpes at delivery	0	13	0
Outcome of pregnancy*			
Vaginal delivery	1	40	7
Caesarean section for obstetric reasons	0	4	0
Caesarean section for herpes	0	17	0
Miscarriage	0	1	0

*Excludes eight women with recurrent herpes in whom outcome unknown.

cost,³ additional patient visits, the inability to detect all infected patients (viral cultures may take up to a week, not all lesions will be culture positive, and attacks may occur between visits), and the morbidity and mortality associated with caesarean section. Also a substantial proportion of neonates will be born to mothers unaware that they are infected⁴ and who consequently will not be screened.

Is there any alternative approach? Suppressive treatment with acyclovir in late pregnancy may offer some hope. The drug is highly effective in suppressing attacks in patients with recurrent genital herpes.⁵ The efficacy and safety of acyclovir in this setting, however, will need to be assessed in carefully controlled studies.

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Death from hypothermia: are current views on causative factors well founded?

Mortality from hypothermia is a sensitive issue and is widely regarded to be associated with poor housing and heating facilities. I assessed the accuracy of this belief by carrying out a retrospective study of computerised inquest records.

Subjects, methods, and results

Deaths occurring in Sheffield and Barnsley in which hypothermia was a registered factor were analysed for the period 1981-6 in the coroner's district of South Yorkshire East (population 772 000). There were 43 deaths (mean 7.5 a year), with an equal sex incidence and mean age at death of 73.9 years. Forty deaths occurred during the period December to March. The mean minimum air temperature on the known or estimated day of death was 0.1°C and lower than the actual or long term monthly means of 1.6°C and 2.5°C, respectively. In 35 subjects hypothermia was secondary to another disease: dementia (nine), cardiovascular disease (nine), fractures (five), pneumonia (five), thyroid disease (three), gastrointestinal disease (two), schizophrenia (two), or meningioma (one). In five subjects hypothermia was secondary to alcohol or drug overdose.

Fifteen deaths occurred in subjects not living alone, of whom 12 suffered from mental illness. These were all under supervisory care (five in hospital; four at home; three in a nursing home), and in all 12 cases death occurred when the subjects wandered away from the place of supervision. The subjects' bodies were discovered between 25 minutes and 21 days (mean 4.4 days) after their disappearance within a mean radius of 1.6 miles. Bodies were discovered accidentally in five cases, by supervisory parties in four, and by the police in three. Eight subjects had been officially reported as missing. In no case were drugs taken because of the mental illness considered to have contributed to the