LETTERS TO THE EDITOR

Home treatment of cytomegalovirus retinitis with intravenous *Ganciclovir*

Cytomegalovirus (CMV) retinitis, is a common late manifestation of AIDS with a prevalence of between 12 and 46% of patients.[1] It is a distressing complication and if left untreated the virus destroys the retina completely resulting in blindness.[2] Treatment with intravenous ganciclovir retards progression, but daily maintenance treatment must be given indefinitely. It is now common practice for patients with CMV retinitis to be given a central indwelling catheter, so that they can treat themselves at home.

Ganciclovir is supplied as a powder which must be reconstituted before use. The data sheet states that infusion solutions may be stored for up to 24 hours and so the drug is usually reconstituted each day by the patient or district nurse. This is inconvenient, as equipment such as needles must be used, and poor sterile technique will increase the risk of septicaemia. It is also wasteful, as the dose of ganciclovir is adjusted for body weight, so the excess from a vial will be discarded. Ganciclovir is supplied in 500 mg vials which cost £20 each and the majority of patients require 300 mg or less as a daily dose.

Published stability data[3] show reconstituted ganciclovir to be chemically stable for five days at room temperature. Syntax (personal communications) indicate this time period can be safely extended further. At St Thomas' Hospital ganciclovir is prepared using aseptic technique in a microbiological safety cabinet (conforming to BS5726 class 2). Sodium chloride 0.9% w/v Injection BP is used as the diluent. The work station is regularly monitored following standard guidelines, to assure an acceptably clean environment, free from particles and microbiological contamination. The cabinet also provides a level of protection for the operator as ganciclovir is potentially carcinogenic.[4] An expiry of 7 days stored in the refrigerator is judged to be pharmaceutically satisfactory. Once a week the patient is given seven bags of reconstituted ganciclovir ready for administration and the patient need only attach the bag to the supplied giving set.

We have now treated seven patients with ganciclovir prepared in this way for periods of up to nine months. All patients have responded well; two patients have developed new foci of infection after 77 days and 210 days of treatment respectively. The patients find it convenient and there have been no episodes of septicemia. This method of treatment is cost effective, and we recommend its wide-spread use.

J WELCH
PAUL FORSEY
ELIZABETH M GRAHAM
St Thomas' Hospital, London SE1 7EH, UK

1 Holland GN, Sidikaro Y, Kreiger AE, *et al.* Treatment of cytomegalovirus retinopathy with ganciclovir. *Ophthalmology* 1987;**94**:815–22.
2 Jabs DA, Enger C, Bartlett JG. Cytomegalovirus retinitis—the acquired immunodeficiency syndrome. *Arch Ophthalmol* 1989; **107**:75–80.
3 Visor GC, Lin L, Jackson SE, Winterlejs JS, Lee G, Kenley RA. The stability of ganciclovir sodium (DHPG sodium) in 5% dextrose or 0.9% sodium chloride injections. *Am J Hosp Pharm* 1986;**43**:2810–2.
4 Ganciclovir for CMV infections. *Drug Ther Bull* 1989;**27**:70–80.

Neisseria gonorrhoeae, Trichomonas vaginalis, and yeast reported from attenders at an antenatal clinic in a rural area in Botswana

In a rural area in Botswana, Africa, 114 unselected pregnant women attending an antenatal clinic (ANC) were examined. *Neisseria gonorrhoeae* and/or *Trichomonas vaginalis* (TV) and/or yeast were reported from 69% of the women. The individual prevalences were: NG 14%, TV 48%, and yeast 39%. The presence of gonococci was not found to be associated with a higher prevalence of *T vaginalis* or yeast, or vice versa. In women from whom a micro-organism was reported, 41% had more than one micro-organism demonstrated.

The yeast:*T vaginalis* ratio was 1:1·3. Reverse ratios were reported from England and Canada,[1–3] but a higher prevalence of *T vaginalis* than yeast was also reported from South Africa,[4] indicating a different ratio of these micro-organisms in pregnant women in southern Africa compared with England and Canada.

Symptoms of lower genital infections were found to be of little use in predicting the presence of the micro-organisms, as 70% of the women had complaints of vaginal discharge, dysuria, or vulval itching, and *N gonorrhoeae, T vaginalis* or yeast were reported from 61% of women without any of these complaints.

Owing to the high prevalences of and potential complications caused by infection with gonorrhoea and *T vaginalis*, screening for these organisms can be recommended for attenders at an ANC represented in the present survey, though systemic treatment of trichomonas infections in pregnant women during the first trimester cannot be recommended.[5]

JEANET PEDERSEN SHELLER
GUNNAR JOHANNESSEN
TILDAH OLSEN
SESOKA MARUPING
Maun General Hospital, Ministry of Health, Botswana.

Research permit has been obtained from the Ministry of Health, Botswana.

Address for correspondence: Dr J P Sheller, Fasanvænget 553, 2980 Kokkedal, Denmark.

1 Hurley R, Leask BGS, Faktor JA, Ivy de Fonseka C. Incidence and distribution of yeast species and of *Trichomonas vaginalis* in the vagina of pregnant women. *Journal of Obstetrics and Gynaecology* 1973;**80**:252–7.
2 Rees DA, Hamlett JD. Screening for gonorrhoea in pregnancy. *Journal of Obstetrics and Gynaecology* 1972;**79**: 344–7.
3 Hill LVH, Luther ER, Young D, Pereira L, Embil JA. Prevalence of lower genital tract infection in pregnancy. *Sex Transm Dis* 1988; **Jan–Mar**:5–10.
4 O'Farrell N, Hoosen AA, Kharsany ABM, van den Ende J. Sexually transmitted pathogens in pregnant women in a rural South African community. *Genitourin Med* 1989;**65**:276–80.
5 Hardy PH, Nell EE, Spence MR, Hardy JB, Graham DA, Rosenbaum RC. Prevalence of six sexually transmitted disease agents among pregnant inner-city adolescents and pregnancy outcome. *Lancet* 1984;**ii**:333–7.

Accepted for publication 6 September 1990