complete assessment of liver function should be made in all cases of idiopathic thrombocytopenic purpura before splenectomy is advised. In Traisman, Wheeler, and Fager's (1950) three cases of virus hepatitis in infancy one child had a platelet count of 30,000.

The occurrence of purpura haemorrhagica in the above case of infective hepatitis may therefore have involved two precipitating factors—a virus infection and liver disease. It is likely, as Ackroyd states in his review of thrombocytopenia in acute infections, that fundamentally the haemorrhages are due to tissue sensitivity, and it was shown in this patient that the thrombocytopenia and the increased capillary fragility were more in evidence in the initial stages of the infection. It is suggested that when a haemorrhagic tendency is present in a virus hepatitis the presence of thrombocytopenia and increased capillary fragility improves the otherwise serious prognosis, provided, of course, that haemorrhage into a vital organ, such as occurred in one of Ackroyd's (1949) cases, does not arise.

G. PENRHYN JONES, M.D., M.R.C.P., D.C.H.,
Senior Medical Registrar.
E. GERALD EVANS, M.R.C.S., L.R.C.P.,
Centre Pathologist.
Caernarvon and Anglesey
General Hospital, Bangor.

REFERENCES

Ackroyd, J. F. (1949). *Quart. J. Med.*, n.s. **18**, 299.
Mills, S. D. (1950). *J. Pediat.*, **36**, 35.
Snell, A. M., Vanzant, F. R., and Judd, E. S. (1930). *Med. Clin. N. Amer.*, **13**, 1417.
Traisman, A. S., Wheeler, R. C., and Fager, D. B. (1950). *J. Pediat.*, **37**, 174.
Whitesell, F. B., and Snell, A. M. (1949). *J. Amer. med. Ass.*, **140**, 1071.

Trichomonas Vaginalis Infections Treated with "Penotrane"

Trichomonas vaginalis is one of the commonest causes of non-venereal vaginal discharge, and is a chronic problem to those treating such cases. Certain of the remedies already available seem to suit some patients and some suit others.

The bactericidal and mycoticidal properties of phenylmercuric salts are well known, phenylmercuric nitrate having been introduced clinically by Levine in 1933. Goldberg *et al.* (1950a) demonstrated that combination with dinaphthylmethane disulphonic acid enhanced the bacteriostatic properties of the phenylmercuric ion. Furthermore, the crystalloid phenylmercuric salts possess little or no capacity to penetrate the tissues, whereas it has been shown (Goldberg *et al.*, 1950b) that the colloidal phenylmercuric dinaphthylmethane disulphonate (" penotrane ") passes through the living skin and enters deeply into the subdermal connective tissue, whilst its toxicity is of the order of that of colloidal silver.

These properties suggested the trial of penotrane in the treatment of trichomonal vaginitis, for which purpose we used a 0.1% aqueous solution and pessaries containing 0.2%. The pessaries were specially made up in a base consisting of solid water-soluble polymers of ethylene glycol, similar to those employed by Siegler (1946) for the preparation of a sulphonamide ointment used for the treatment of vaginitis.

We treated 30 cases of vaginal discharge in which *Trichomonas vaginalis* was found on microscopical examination. Sixteen of these cases had been previously treated, principally with an arsenical vaginal compound, and had either relapsed or had reacted and responded unsatisfactorily. The treatment given consisted in painting the vagina with the aqueous solution of penotrane and inserting a penotrane pessary. Where possible the patient had paintings daily with insertion of a pessary, and where that was impracticable either painting once a week followed by the insertion of a pessary by the patient each night, or just the insertion of pessaries. There was a marked tendency to relapse after menstruation, but if the pessaries were used during the period this tendency was obviated. The insertion of pessaries every night for two weeks cleared the condition clinically and pathologically, but relapse occurred if the treatment was not continued. By continuing to use the pessaries on alternate nights and then gradually increasing the interval the patients were found to have no further symptoms. The average length of treatment was twelve weeks.

In nine cases the condition cleared, and at the time of writing no relapse has occurred, the first patients having been under observation for nine months. In 10 cases the condition cleared at first, but was followed by clinical or pathological relapse, usually after a menstrual period or a short lapse in treatment. Four cases improved, but their attendance has been so irregular that no definite conclusions can be drawn. One case showed improvement, but developed a cervical erosion after becoming negative to *Trichomonas vaginalis*, and treatment had to be changed. In three cases there was no improvement. Three patients did not return or were transferred after having shown improvement, but treatment was not completed.

In conclusion, it seems that penotrane has a place in the treatment of *Trichomonas vaginalis* infections, but at present relapses tend to occur, particularly after menstruation or if treatment is interrupted even for a short time. It is recognized, however, that relapses or recurrences, often due to reinfection, are frequently observed with other tried remedies, and penotrane appears to suit some patients who have not responded to other treatments.

Our thanks are due to Dr. M. M. Shaw for permission to carry out these trials on the patients of the Marlborough Clinic, and to Messrs. Ward. Bienkinsop and Co. Ltd. for the supplies of penotrane.

G. H. PLATT, M.B., B.S.,
Assistant Medical Officer, V.D. Department.
J. SEAMAN, M.B., B.S.,
Registrar, V.D. Department.
J. W. HADGRAFT, Ph.C., A.R.I.C.,
Chief Pharmacist.
Royal Free Hospital, London.

REFERENCES

Goldberg, A. A., Shapero, M., and Wilder, E. (1950a). *J. Pharm. Pharmacol.*, **2**, 20.
——, ——, —— (1950b). Ibid., **3**, 89.
Levine, B. (1933). *J. Amer. med. Ass.*, **101**, 2109.
Siegler, S. L. (1946). *Amer. J. Obstet. Gynec.*, **52**, 1.

The *Journal of the American Medical Association* (July 28, p. 1231) reports a case of a negro woman suffering from mumps who gave birth to a child who was not infected. Mumps virus was isolated from the milk of the mother, and passed five times through eggs ; this strain was used to induce mumps in two lactating monkeys. Neither of the infant monkeys showed any serum antibodies or signs of illness. The author suggests that either the virus failed to pass the placental barrier or the infant was insufficiently developed to have produced a detectable antibody response.