THE ERYTHROCYTE SEDIMENTATION RATE IN INFECTIVE HEPATITIS AND IN MALARIA

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In his lucid and balanced survey of the problems confronting us concerning infective hepatitis Witts (1944) writes: "A major difficulty in the pre-icteric stage is the differentiation from clinical malaria . . . and a simple laboratory test for infective hepatitis would be an immense help." It is the purpose of this short paper to show that in the erythrocyte sedimentation rate we already have such a test at our disposal, subject to its usual limitations, especially as an aid in the differentiation mentioned.

The behaviour of the E.S.R. in 35 unselected cases of infective hepatitis was normal during the first week or ten days, whether there was fever or not. It rose slowly and steadily during the period of biliuria, to reach a maximum commonly between 15 and 30 mm. in one hour (Wintrobe). During the stage of recovery, when the urine was free from bile, the E.S.R. returned slowly to normal, a minority of cases showing further acceleration before this occurred. These conclusions were supported by sporadic readings in other cases, especially the fact that the E.S.R. was normal or low in the febrile or pre-icteric phase, and below 10 during the first week. The accompanying Graph depicts average readings on each day of the disease up to the twelfth day. The numeral above each reading indicates the number of cases from which an average was obtained. This graph does not distinguish febrile from afebrile cases.

The behaviour of the E.S.R. in malaria is in sharp contrast. The Graph shows the average difference during the first 12 days, the malaria graph being constructed in the same way as that just described for infective hepatitis. As no essential difference was observed between M.T. and B.T. cases, nor between fresh attacks and cases of relapse, they have all been shown as one group. The general trend was confirmed by single readings in other cases. The diagnosis rested on a positive blood smear in every instance, and treatment with quinine, gr. 10 t.d.s., was started as soon as it was made. It is not known whether this

influences the test; many of the cases had mepacrine also. During the first 10 days the E.S.R. ranged between 12 and 60 mm. in one hour in 28 cases, and was below 10 in only 4; if cases in which only one estimation was made are added, these figures become 43 and 8 respectively. In other words, the E.S.R. during the first 10 days of malaria was over 10 in 84% of 51 cases.

In the infective hepatitis cases, during the first 10 days the E.S.R. was below 10 in 25 instances, and ranged between 10 and 20 in 5; if cases in which only one estimation was made are added, these figures become 30 and 5 respectively. Thus during the first 10 days of infective hepatitis the E.S.R. was under 10 in 86% of 35 cases, and was never higher than 20. In malaria it fell between 20 and 60 mm. in one hour in 23 out of 32 cases, or in about two-thirds of them.

The slow E.S.R. in the early phase of infective hepatitis serves to distinguish it from certain other fevers, but further work is required in this field. The important thing is that in the E.S.R. and in the white count we have two non-specific tests which serve to place a P.U.O. into a certain class or group. It would be helpful if other non-specific group tests could be discovered which would further narrow down the field of differential

diagnosis. No attempt was made to investigate the cause of the slow rate in infective hepatitis. It may depend upon the relationship of liver function to fibrinogen and to the serum albumin—globulin ratio.

It was found that the raised E.S.R. in malaria may persist for several weeks. This may be of value in helping to decide whether a case treated as clinical malaria really was malaria or some short-term fever. Of 72 measurements made between the 10th and 20th days in malaria, 60 ranged between 11 and 53 mm. in one hour and 12 were 10 mm. or under—i.e., 84% were raised, often considerably. In a group of 42 cases of short-term fever in North Africa and Italy, without physical signs and with no localizing or upper-respiratory-tract symptoms, the E.S.R. was normal by the end of the first week in 30, and was approaching normal and was under 20 by the end of the second week in the remainder. Some of these cases were probably sandfly fever.

Conclusion

The E.S.R. is shown to be of value in the early diagnosis of infective hepatitis, especially in its differentiation from clinical malaria.

In the first 10 days of infective hepatitis about 85% of cases have an E.S.R. below 10 mm. in one hour (Wintrobe). In the first 10 days of malaria about 85% of cases have an E.S.R. above 10 mm.

An E.S.R. above 20 mm. in one hour during the first week of a P.U.O. practically excludes infective hepatitis; on the other hand, such a reading occurs in about two-thirds of all cases of malaria during the first week.

The E.S.R. serves to distinguish clinical malaria from short-term fevers of uncertain aetiology. In malaria the acceleration is maintained for at least two or three weeks in about 84% of cases; in short-term fevers the E.S.R. is commonly normal within one or two weeks of the onset.

I wish to thank the medical officers in my division for their co-operation in this investigation; the work was theirs, not mine.

REFERENCE

Witts, L. J. (1944). *British Medical Journal*, 1, 739.

TREATMENT OF PLACENTA PRAEVI, WITH SPECIAL REFERENCE TO THE USE OF WILLETT'S FORCEPS

A REPORT ON 134 CASES

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Methods of Treatment

Broadly speaking, the present-day methods of treatment of placenta praevia may be summarized under two main headings:

1. *Methods which Aim at the Control of Haemorrhage by Producing Pressure on the Bleeding Area.*—An essential feature of these methods is the maintenance of the pressure until full dilatation of the cervix allows of delivery of the child *per vias naturales*. The various methods of producing pressure on the placental site include:

(a) *Version.*—In England probably more cases have been treated in the past by "early version and slow extraction" than by any other means. Version (external, bipolar, or internal, in order of preference) is performed, one leg is brought down, and bleeding ceases under the pressure exerted by the half-breech on the placental area. Results in large series of cases show an average maternal mortality of about 7% and a foetal mortality in excess of 70%.

(b) *Bag.*—Another method of producing pressure—not very popular in England—is by the insertion of a de Ribes bag or metreurynter through the ruptured membranes. Mild traction on the filled bag produces compression of the placenta against the wall of the lower uterine segment. Reports in the literature show a