general practice than might be supposed, especially in view of the importance of making the injection "then and there" at the earliest possible moment.

6. That the early initial dose completely aborts the attack in nearly every case, and that therefore if the treatment be used in influenza epidemics on a wholesale scale and early enough it is the most valuable agent that we at present have discovered for combating these epidemics.

7. That treatment administered at later stages, providing that the attack has not existed for more than forty-eight hours, considerably shortens the duration of the disease.

8. That although my present series of cases is too small to show whether the liability to complications is reduced, I certainly think that this will be proved to be the case.

THE HINTON TEST FOR SYPHILIS.

BY

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THE Hinton test for syphilis¹ has attracted so much attention, more especially in America, that a trial of its value appeared to be a subject of considerable interest. The test is essentially an agglutination reaction depending on the reaction between syphilitic serum and an antigen consisting of a mixture of glycerol, cholesterol, and extract of beef muscle; it is simple to perform, and, what is even more important, easy to read. A satisfactory antigen having been obtained, all that is necessary is to mix varying amounts of inactivated serum with a fixed amount of antigen and incubate for sixteen hours at 37° C. Reading is done with the naked eye, and results are recorded according to the agglutination of particles.

For the above purpose 500 serums were submitted to the Wassermann² and Hinton tests. They were mostly obtained from treated cases of syphilis, but a number from untreated cases of syphilis, and cases without syphilis were included. The following figures show how far the two tests agreed.

Absolute agreement	...	...	...	409	458 = 91.6%
Relative agreement	...	...	...	49	
Disagreement	...	...	...	42	
Total cases	...	...	...	500	

Of the 42 cases in which there was disagreement the Wassermann test appeared to be correct in 25 and the Hinton in 17. Of the 25 cases, in 18 of treated syphilis the Wassermann reaction was positive and the Hinton negative; in 3 cases of untreated syphilis the Wassermann reaction was positive and the Hinton negative; in 2 cases without syphilis the Wassermann reaction was negative and the Hinton strongly positive; in 2 cases without syphilis the Wassermann reaction was negative and the Hinton weakly positive. Of the 17 cases, in 15 of treated syphilis the Wassermann reaction was negative and the Hinton positive; in 2 cases of untreated syphilis the Wassermann reaction was negative and the Hinton positive.

From the above it will be seen that the Hinton test gave four apparently false positive results. Two of these were only weak positives and might have been read as "doubtful." The explanation of the other two is not clear; they may have been due to errors in technique. Apart from these the agreement between the two tests was remarkably close, especially when consideration is given to the fact that a large proportion of the serums were "borderline" ones from treated cases of syphilis.

In addition to the above the opportunity was taken, when a sufficient amount of serum was available, to compare the Hinton with the Kahn³ test, and also with the Sigma⁴ test.

The Hinton and Kahn Tests Compared.

Absolute agreement	...	...	...	170	187 = 93%
Relative agreement	...	...	...	17	
Disagreement	...	...	...	14	
Total tests	...	...	...	201	

Of the 14 cases in which the two tests showed disagreement 7 were in favour of the Kahn and 7 in favour of the Hinton, as judged by the clinical history of the cases.

The Hinton and Sigma Tests Compared.

Absolute agreement	...	...	...	113	127 = 92.7%
Relative agreement	...	...	...	14	
Disagreement	...	...	...	10	
Total tests	...	...	...	137	

Of the 10 cases in which there was disagreement 6 were in favour of the Hinton and 4 in favour of the Sigma.

It would appear from the above that the Hinton test can claim to be the equal, at least, of the Wassermann, Kahn, and Sigma tests. It is the easiest to perform, and far easier to read than either the Kahn or Sigma test. The only difficulty is the standardization of the antigen; once this is overcome the setting up and reading of the test are simplicity itself.

I have to thank Dr. W. A. Hinton for the description of his technique and for supplying me so kindly with the antigen used in the above investigation, and also Colonel L. W. Harrison for permission to publish the results.

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THE WASSERMANN REACTION AND KAHN TEST.*

BY

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On May 24th, 1928, the Kahn test was adopted as routine, to be performed in parallel with the Wassermann test on all blood specimens received in sufficient quantity. Up to December 31st, 1928, some 169 specimens had been dealt with in this fashion. Of these, 108 were negative by both tests, one specimen was positive by both tests, and 26 were strongly positive by both tests, using the nomenclature of the League of Nations Health Committee. The two reactions can be said to have been in complete agreement in 135 specimens out of 169, or 80 per cent. So far there has not been an instance of a strongly positive Wassermann reaction occurring with a negative Kahn test in the same specimen, although a strongly positive Wassermann reaction has coincided with a "weakly positive" Kahn test on two occasions. On one occasion the Wassermann reaction was negative and the coincident Kahn test strongly positive; this occurred in a blood specimen from a man with a remarkable fibrous hypertrophy of his upper and lower gums, a portion of which swelling, on section, showed typical syphilitic granulation tissue.

In the 34 cases not showing complete agreement in this series, the Wassermann reaction and the Kahn test were roughly in agreement.

Of 11 cases, the Wassermann test was negative and the Kahn weakly positive in 3; the Wassermann test being weakly positive and the Kahn negative in 8.

Discrepancies, when they occurred, were of degree rather than direct opposition.

Slight discrepancies occurred in 9 cases, the Wassermann reaction being weakly positive and the Kahn positive in 2; the Wassermann positive and the Kahn strongly positive in 3; while the Wassermann test was strongly positive and the Kahn test weakly positive in the remaining 4.

Marked discrepancies occurred in 14 cases. Of these, the Wassermann reaction was negative and the Kahn positive in 3; the Wassermann was positive and the Kahn negative in 10; the remaining case showing a negative Wassermann and a strongly positive Kahn reaction.

The two reactions can be said to have been in nearly complete agreement in 146 out of 169 specimens, or roughly 86.4 per cent.

Of the 13.6 per cent. of discrepancies, only one (0.6 per cent.) was of supreme importance (Wassermann negative, Kahn strongly positive). The remaining 13 per cent. contains 13 instances of contradiction (Wassermann positive,

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