CARDIOLIPIN KOLMER TESTS ON PLASMA*

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In a letter to the Editor of this Journal, it has been stated that *cardiolipin* Kolmer tests are consistently anticomplementary when plasma is used in place of serum (Klein, 1956).

Since this test was not included in the paper criticized (Coleman, Appleman, and Kurtz, 1955), this report concerns our results using cardiolipin Kolmer antigen with serum and with plasma cleared of coagulated fibrinogen (Table).

Method

Potassium oxalate tubes were prepared according to previous publications (Coleman and Appleman, 1954). The tests were performed as described in the Manual of the U.S. Public Health Service (1955).

Blood specimens were collected in the usual manner from a prominent vein of the arm. A portion of the sample was allowed to clot in a clean, dry test-tube and the remainder was added to the tubes containing the anti-coagulant. The plasma was removed after a 5-min. period of centrifugation and then heated for 30 min. at 56° C. At the conclusion of the incubation period, each sample of plasma was centrifuged for 10 min. at 3,000 r.p.m. The supernatant, thus cleared of precipitated fibrinogen, was decanted into another tube and then employed as a serum would be in the various sero-diagnostic tests.

This last step is the crux of the procedure. Plasmas used in serologic tests with the coagulated fibrinogen still present are usually completely unsatisfactory in flocculation procedures and are anticomplementary in complement-fixing procedures.

It is interesting to note that this critical step has been omitted from some of the abstracts of this work (Coleman and Appleman, 1955a, b, c).

Results

The results are summarized in the Table. It can be seen that there is no evidence of anticomplementary reactions in either the positive or the negative sera.

Discussion

It is apparent that cardiolipin Kolmer antigen functions as well as the lipoidal Kolmer antigen in tests using plasma. When such is not the case, there

TABLE
CARDIOLIPIN KOLMER TESTS
Comparison of results with serum and with oxalated plasma in negative and in treated cases

Case No.	Treated Cases		Negative Cases	
	Serum	Plasma	Serum	Plasma
1	44000000	44300000	00000000	00000000
2	42100000	21000000	00000000	00000000
3	44410000	44440000	00000000	00000000
4	44400000	44410000	00000000	00000000
5	44400000	44410000	00000000	00000000
6	44443000	44444400	00000000	00000000
7	00000000	00000000	00000000	00000000
8	44444440	44444410	00000000	00000000
9	21000000	20000000	00000000	00000000
10	40000000	40000000	00000000	00000000
11	41000000	41000000	00000000	00000000
12	44444000	44444400	00000000	00000000
13	21000000	31000000	00000000	00000000
14	00000000	20000000	00000000	00000000
15	44444400	44444400	00000000	00000000
16	44000000	42100000	00000000	00000000
17	10000000	10000000	00000000	00000000
18	44410000	44400000	00000000	00000000
19	40000000	40000000	00000000	00000000
20	33210000	21000000	00000000	00000000
21	20000000	20000000	00000000	00000000
22	44400000	44400000	00000000	00000000
23	21000000	21000000	00000000	00000000
24	32100000	10000000	00000000	00000000
25	20000000	20000000	00000000	00000000
26	21000000	21000000	00000000	00000000
27	21000000	21000000	00000000	00000000
28	40000000	40000000	00000000	00000000
29	44440000	44400000	00000000	00000000
30	00000000	00000000	00000000	00000000
31	00000000	00000000	00000000	00000000
32	21000000	43100000	00000000	00000000
33	00000000	32100000	00000000	00000000
34	00000000	20000000	00000000	00000000
35	44444442	44444444	00000000	00000000
36	00000000	00000000	00000000	00000000
37	10000000	00000000	00000000	00000000
38	00000000	00000000	00000000	00000000
39	00000000	20000000	00000000	00000000
40	43210000	43210000	00000000	00000000
41	00000000	21000000	00000000	00000000
42	42100000	42100000	00000000	00000000
43	44400000	44400000	00000000	00000000
44	42200000	42200000	00000000	00000000
45	40000000	40000000	00000000	00000000
46	20000000	20000000	00000000	00000000
47	44400000	44440000	00000000	00000000

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is usually a reason. In some cases brought to our attention, workers in the field neglected to read the instructions carefully, particularly the point at which the fibrinogen is sedimented after the incubation period. Other instances occurred when abstracts of the original articles that did not mention or make clear this significant step were used as guides.

This demonstrates some scientific principles with which we all are familiar, yet it is good to refresh our memories on occasion. Abstracts should only be used as guides to determine whether we want to read the original article. If the subject is still of interest, then the original should be sought out.

Techniques and tests reported in a paper should be followed implicitly. It is unsound to infer that a similar technique or related test can be substituted.

Criticism is vital to science and should be encouraged; however, that criticism itself must be scientific and adhere to basic rules.

Summary

- (1) When blood treated with potassium oxalate

is employed in the performance of the Kolmer test, the cardiolipin antigen may be used with as much success as has been previously shown using the lipoidal antigen.

- (2) As in all serologic tests for syphilis employing plasma in place of serum, the fibrinogen, precipitated by heating in the water bath, must be removed by centrifugation before the tests are performed.

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