

COAGULATION STUDIES IN WOMEN WITH INTRA-UTERINE CONTRACEPTIVE DEVICE (I.U.C.D.)

by

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Population explosion is one of the foremost problems facing the universe and naturally, various methods for contraception have been practised from time to time. Of these methods, much stress has been laid on the I.U.C.D. (Lippes loop) in our country. There have been a few reports in the literature about some menstrual abnormalities after its insertion. Lippes (1965) reported a change in the menstrual pattern of as many as 90% of the women using the loop. This is quite a high percentage and hence a study of the coagulation phenomenon before the insertion of loop was taken up and an attempt made to correlate any abnormal find-

ings before insertion with excessive bleeding after the fitting of loop.

Material and Methods

One hundred and thirty-three (133) married women who came for I.U.C.D. insertions were investigated for their coagulation mechanism and the following tests were performed:

1. Bleeding time (Modified Ivy *et al.*, 1935).
2. Clotting time (Modified Lee and White, 1913).
3. Hess's capillary fragility test.
4. Platelet count (Dacie, 1963).
5. Clot retraction by plasma method (Dacie, 1963).

TABLE I

Sr. No.	Test	Range	Mean
1	Bleeding time	0'-48" to 7'-56"	2'-54"
2	Clotting time	2'-39" to 12'-34"	7'-16"
3	Hess test	Positive 11 Doubtful 2 Negative 120	
4	Platelet count	122,000 to 743,000/cmm.	265,500/cmm.
5	Clot retraction	25 to 70 %	48.9%
6	Prothrombin time and Index	12 sec. to 17.5 sec. 78 to 106%	15.5 sec. 98.7%
7	Thromboplastin generation (after 8 minutes of incubation)	63 to 117%	93.1%

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6. Prothrombin time and index (Quick, 1935).

7. Thromboplastin generation test (Hicks and Pitney, 1957).

Observations

The results of the different tests are given in Table-1.

The values of these tests in normal healthy subjects are given in Table II:

Discussion

It would be observed from the foregoing tables that the only abnor-

TABLE II

Sr. No.	Test	Range	Mean
1	Bleeding time	0.44" to 8'-10"	3'-00"
2	Clotting time	2'-30" to 10'-30"	6'-49"
3	Hess test		Negative
4	Platelet count	215,000 to 468,000/cmm.	289,500/cmm.
5	Clot retraction	35 to 65%	47.5%
6	Prothrombin time and Index	14 to 17.5 sec. 83 to 105%	15.5 sec. 96.6%
7	Thromboplastin generation (after 8 minutes of incubation)	75 to 100%	86.88%

Out of the 133 cases who initially reported for I.U.C.D. insertion and were investigated on the above lines, 111 returned for the loop fitting. Bleeding, as observed in the first week after loop insertion, was practically negligible in these cases. The cases were advised to come for follow up, but only 74 cases turned up. It can be presumed that the rest did not have any complaints.

In the 74 cases who came for follow up, the type of menstrual periods was as given in table III.

TABLE III

Type of menstrual period	No. of cases
Menorrhagia	2
Markedly increased in volume and duration	17
Moderately increased	1
Normal	51
Scanty	3

The loop had to be removed in 8 cases, while the number was changed in 1 case; the remaining cases became normal with medicinal treatment only; this was of a supportive type.

mal finding was positive Hess test in 11 cases, out of which 9 had heavy menstrual periods or menorrhagia; conversely, out of all the abnormal bleeding cases, Hess test was positive in only 47.4%. One can postulate that it is probably the abnormal condition of the capillary wall which is responsible for abnormal bleeding after loop insertion. As the Hess test is quite simple to perform, even by the paramedical staff, its wider use could be of benefit in predicting such abnormality, so that some other contraceptive measure can be adopted in such cases.

Summary

1. One hundred and thirty-three cases who came for I.U.C.D. insertions were investigated for coagulation mechanism status prior to insertion.

2. The only abnormality detected was the positive Hess test in 11 cases; the results of the rest of the tests were all within normal range.

3. Out of 111 cases, who came for I.U.C.D. insertion, 19 showed mar-

edly increased menstrual periods or menorrhagia. Out of these, 9 had positive Hess test even prior to loop insertion (47.4%).

4. Use of Hess test as a screening procedure is suggested.

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