

A SIMPLE METHOD OF CONTRACEPTION WITH INTRAVAGINAL UREA SOLUTION

by

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When the intrauterine contraceptive devices were introduced in the National Family Planning Programme of this country, it was felt that they would be widely used as they provided a cheap, effective and reversible method of contraception, but the principal hurdle in their large scale acceptance was troublesome bleeding which necessitated removal in a large number of cases (Engineer and Sanwal, 1972; Mukerjee *et al*, 1969; Pujari *et al*, 1968 and Kishore *et al*, 1968).

In our follow-up of cases fitted with intra-uterine contraceptive device at the Family Planning Clinic of Queen Mary's Hospital, Lucknow, it was noted that a large number of the devices that were removed for bleeding were roughened with deposits and consequently a study of the biochemical constituents of the intra-uterine fluid was undertaken in collaboration with the Endocrinology section of Central Drug Research Institute to find out if this could shed any light on the cause of the bleeding. The principal changes recorded were an increase in the level of protein, urea and uric acid in the intrauterine fluid of I.U.D. fitted women

(Kar, *et al*, 1968, 1969; Engineer *et al*, 1970). This was followed by the interesting observation that sperm specimens *in vitro* were completely lysed when brought into contact with urea solution and this spermatolytic effect of urea has been utilized at the Central Drug Research Institute to manufacture a cellulose film impregnated with this substance called the "Cent Square" as a simple intravaginal method of contraception. During clinical trials with this film at our clinic some women objected to the residue left by the film and so it was decided to carry out a trial using only a solution of urea.

Material and Methods

The present study is an evaluation of N/10 urea solution as a contraceptive agent and was commenced in May, 1971. Seventy women have so far accepted the method. N/10 urea solution is prepared by dissolving 6 gm. of urea in 1000 ml of distilled water. The solution was dispensed in glass bottles and the women taught to make cotton tampons which they were told had to be soaked in the urea solution and inserted intravaginally at the time of intercourse. All the women were instructed that the tampon should not be removed immediately after intercourse and should be preferably left in all night and removed next morning by pulling on

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the long thread attached to the middle of the tampon. The effectiveness of this method was checked by the performance of Huhner tests in 32 cases.

Observations and Results

Thirty of the women who opted for this method had not used any contraceptive previously. The contraceptive agents used by the remaining 40 women are shown in Table I.

TABLE I
Previous Contraceptive Used

Previous contraceptives used	No. of cases
Conventional (Condom)	24
I.U.C.D.	11
Oral pills	5
Total	40

Forty-two cases (60%) have returned for follow-up and 10 have discontinued the method. The period of use in these 42 cases is shown in Table II.

TABLE II
Use in Months

Months of use	Number
1 to 3	14
4 to 6	6
7 to 9	4
10 to 12	18
Total	42

Reasons for Discontinuance

Eight cases wanted a surer method of contraception so they changed over either

to oral pills (6 cases) or I.U.C.D. (2 cases). One case dropped out because of objection by the husband. Accidental pregnancy was noted in one woman who removed the tampon immediately after intercourse.

Side Effects

No local complications such as vaginal irritation or discharge were seen in women using N/10 urea solution. Speculum examination revealed normal healthy vagina in all cases.

Results of Huhner tests

The efficacy of N/10 urea solution as a contraceptive measure was confirmed by performing Huhner tests in 32 cases. No sperms were seen in material pipetted from the cervix in any of the cases. In the material aspirated from the vagina one or two dead sperms were sometimes seen.

Comments

This study reveals that N/10 urea solution is a simple, effective and acceptable method of contraception. The absence of vaginal irritation or discharge virtually obviates the need for regular follow-up and this is a factor of considerable importance in the implementation of a contraceptive programme in low socio-economic groups.

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