

# INVITRO-SPERM IMMOBILISATION TEST AND ITS CLINICAL APPLICATION WITH THE USE OF NANOXYNNOL VAGINAL CONTRACEPTIVE PESSARY

By

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## SUMMARY

The wives of North African desert tribesmen mixed gunpowder solutions and foams from camel's mouth and drank the portion. The Chinese fried quick silver in oil and drank it. These are but a few of the more picturesque methods of contraception used by ancient men showing his effort to achieve family planning. Obviously the unwanted child was as much a concern to the ancient as to the modern man. More successful and more sanitary methods of conception control are now available and one of them is the use of Nanoxynol vaginal contraceptive pessary. PCT was done on 50 patients after the use of pessary and invitro sperm immobilisation test was done to compare the results with PCT.

### *Introduction*

The unwanted child was as much a concern to the ancient as to the modern man. More successful and more sanitary methods of conception control are now available and one of them is the use of Nanoxynol vaginal contraceptive pessary. Spermicides are a biologically obvious way of interrupting fertility and have the advantage that they do not depend on highly skilled persons for the prescription and use. Their use is increasing both in developed and developing countries. Nanoxynol is a non-ionic surfactant which causes immediate irreversible membrane alteration which renders sperms immobile and therefore unable to penetrate the ovum.

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The objects of the study are:

1. Rate of dissolution of the pessary in clinical situations.
2. Evaluation of spermicidal activity on PCT.
3. Laboratory evaluation of the modified sander cream test.
4. Acceptability of the pessary.

### *Rate of Dissolution of Pessary in Clinical Situations*

Thirty cases were studied. The per cent of pessary dissolved was noted at the end of eight and twelve minutes and the results were tabulated as follows:

In 26 cases 50% of pessary was dissolved at the end of 8 minutes and 2 cases 70% of it was dissolved whereas at the end of 12 minutes 70% of the pessary was dissolved in 26 cases and 100% dissolved in 6 cases.

*Invitro Sperm Immobilisation Test*

Two gram pessary was dissolved in 16 ml of normal saline which gave a dissolution of 1:3. Half ml of this solution was added to half ml of saline which gave a dissolution of 1:16. Such dissolution were made upto 1:512. To each test tube 0.1 ml of semen whose sperm count and mobility were studied previously is added and an hanging drop preparation studied under the microscope after 40 seconds and then at the end for 10 minutes and results were tabulated as follows:

In dilution upto 1:256—all dead sperms were seen and only in dilution of 1:512—1 to 2 sluggishly motile sperms were seen.

This suggests that even in high dilution the pessary could maintain its spermicidal potency.

*Evaluation of Spermicidal Activity on PCT*

PCT after use of Nanoxynol vaginal pessary was preferred in fifty cases wherein patients were instructed to introduce the pessary as high as possible in the vagina 5 minutes before coitus. If ejaculation does not take place within 8 minutes a further pessary should be introduced. The patient is asked to present to the hospital within two hours after coitus. The evaluation and results of the study:

- PCT showing-lysed—sperms—10
- PCT showing—dead sperms—40
- PCT showing—sluggish or actively motile sperms—Nil

This tests rightly suggest that Nanoxynol vaginal pessary causes loss of motility and fructolytic power of sperms.

*Acceptability*

The tolerance and acceptability of these pessary was evaluated in fifty healthy sexually active women who used the pessary according to the recommended instructions. The vaginal suppositories proved to be well tolerated and highly acceptable.

	Wife	Husband
Local irritation	1	2
Sexual satisfaction	50	50
Difficulty in introducing the pessary	2	

Sexual satisfaction was adequate in all couple only one female and two males had local irritation and two patients had difficulty in introducing the pessary.

Thus, in conclusion these vaginal pessaries which are marketed as Rendells may be recommended with confidence to patients who prefer to plan their families by simple well tried spermicidal contraception. IUCD and oral pills are definitely more efficient but they require too a greater degree of motivation than simple chemical contraception such as Rendalls which are much more readily available, simpler to use and remarkably efficient.