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Quinacrine-Non Surgical Tubal Occlusion.

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Abstract :

Quinacrine is an antimalarial drug which causes aseptic inflammation and fibrosis of mucous membrane as a sclerosing agent. Dr. Jaime Zipper and his co-worker of Santiago has utilised this idea for the blockage of tubal lumen by sclerosis of tubal ostium after introduction of Quinacrine into uterine cavity. Population is a great problem all over the world in spite of family planning excised extrensively including female sterilization. In the developing countries especially, Bangladesh both female and male are frightened to any operative procedure.

Quinacrine has been used in a total of 177 women about a period of three years from October'89 to August'92 in Chittagong Medical **College Hospital. Two of them** conceived, among those attended for follow up. The Quinacrine nonsurgical female sterilization method has been described as one, that is safe, effective as comparable to surgical method that can be performed even by paramedics as an out patient after a brief of training.

Introduction :

Sterilization is the final step in preventing procreation. Occlusion of fallopian tubes has remained the most acceptable method of female sterilization since the time of LUNGREN in 1880. There have been more than 100 surgical procedures described for sterilization of women uptil now. Excepting surgery, non surgical method has transcended all other method for tubal occlusion. This non surgical method has been done by monthly insertion of quinacrine pellets by transcervical procedure with intrauterine device inserter for two cycles. We have selected 177

women forquinacrine insertion as chemosterilant upon certain criteria. Of our 177 women firstforty received seven pellets of quinacrine, each containing 36 mg. One hundred and ten women received 3 capsules of Ibuprofen (18. 5X3-55.. 5mg) in addition to 5 quinacrine, total of 8 pellets. Remaining fortyfive case received 5 pellets of quinacrine and 3 capsules of Ibuprofen in addition to 125mg of amphicillihn, last regimen is continued.

Design of the study :

The data for this communication were taken from a prospective study that consisted of cases who were eligiable for permanent method of sterilization. The acceptors were motivatedduring counseling of menstrual regulation programme, who have refused surgical method of sterilization. Subjects were informed before starting the procedure that the method **was** permanent. Three groups of women were selected for the study. Time encounter for the procedure was (1) On proliferative phase of menstrual cycle i. e. 7th to 10th day of her last menstrual period (interval) (2) Two weeks period after menstrual regulation who terminate her pregnancy within 6 weeks duration (Post MTP) (3) Postnatal cases after 6 weeks of her child birth or until after the first period returns. A rigid follow up schedule was maintained at 3, 6, 12 months and yearly after second insertion. The cases were asked to report accordingly and in between, if any complaint.

Methods :

The clients history was taken, vital signs monitored, a careful pelvic examination done to rule out any local pathology, particularly sepsis. No special preparation were taken. After exposing the cervix anterior lip held with volsellum forcep and uterus sounded. All pellets were inserted into the uterus using intrauterine device inserter. The inserter must be sterilized and dry before loading of medication. Drying may be by spirit and air drying. The women was watched for half and hour after procedure to see whether any pellet came out and sent home later. All womn were asked to take pill for two cycle after first insertion.

Result :

This small scale study gives information about acceptance, out come and complication of this new procedure.

Table-I : Age Distribution among quinacrlne acceptors :

Age	No	Percentage
O-25 Years	4	2.2
26-30 Years	45	25.42
31-40 Years	118	66.66
Above 40 Years	10	5.6

Table-l shows in 163 cases (92%) the age was 26-40 years and in 10 cases (5.6%) above the age of 40 years. Minimum age i. e. below 25 years was four cases (2.2%).

Table-2 : Distribution of Acceptors According to Parity

Parity	No	Percent age
2	5	2.8
3	34	19.20
4	41	23.16
≥ 5	97	54.80

Above table show that majority of acceptors had five or more childrens because they need perment sterilization.

Table-3 : Distribution of clients according to the time interval between last child birth and quinacrlne insertion.

Last child birth	No	Percentage
< 1 Year	30	16.94
I-2 Years	39	22.03
2-3 Years	35	19.77
≥ 3 Years	73	41.24

Table-4 : Distribution of acceptors In light of practice of different methods of contraception before sterilization.

Method	No	Percentage
Combined oral Contraceptive	57	32.20
Intrauterine contracep- tive device (IUCD).	40	22.59
Safe period	12	6.77
Nill	2	6.77
	45	25.42

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Method	No	Percentage
Injectable contraceptive (Oepoprovera.).	8	4.51
Failure of surgical Sterilization.	3	1.6

Above table shows most of the clients who were experienced in other fertility control measures proviously accept quinacrine insertion. Only 45 cases (25.4%) had nocontraceptive knowledge previously.

Table-5 : **Time *of*** insertion :

Time	No	Percentage
Postnatal	5	2.8
Post M. T. P.	55	31.07
Interval	117	66.10

As for the time of insertion, interval sterilization done in 117 cases (66.0%) this was the major acceptors.

Table-6 : Educational status among quinacrine acceptor :

Literacy Level	No	Percentage
Illiterate	60	33.89
Primary School Level	68	38.41
Secondary School Level	28	15.81
Higher Secondary School	13	7.3
Graduation Level	8	4.5

Among 177 case 4.5% cases (8) had education up to graduation Level as compared to 33.89% cases (60) had no basic education at all.

Table-7 : Socio-Economic status :

Income in taka per month	No	Percent age
O-500	19	10.73
600-l 000	47	26.55
1100-2000	58	32.76
2100-3000	35	19.77
Above	18	10.16

An analysis based on income group shows in Table-7 that poor and middle class peoples were the main acceptors.

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Table-8 : Side effect and complication :

Symptoms	No	Percentage
Menorrhagia	5.	2.8
Watery vaginal discharge	6	3.38
Amenorrhoea	10	5.6
Failure (Pregnancy)	2	**1.1**
EctopicPrengancy	—	—

The most common complication in our study shown in Table-8 was watery vaginal discharge in 6 cases (3.38), menorrhagia in five cases (2.8%) and ten cases reported amenorrhoea in her follow up visit. But two of them were pregnant, proved clinically and by ultrsonography. Rest other cases were not pregnant. Only quinacrine pellets was given in one case and quinacrine, ibuprofen in other case.

Table-9 : Follow up :

Months	No	Percentage
3 "	98	55.36
6 "	52	29.37
12 "	12	6.7
24 "	2	1.1

All cases were invited for follow up at 3, 6, 12 months and yearly after second insertion. Ninety eight cases came 3 months, 52 cases after 6 months, 12 cases after 12 months and 2 cases after 2 years, shown in Table-g.

Table-10 : Period of study :

Year	No	Percentage
1989	7	3.95
1990	9	5
1991	96	54.23
1992	65	36.72

Above table shows that acceptability of quinacrine non surgical sterilization method is gradually increasing over the study period because it is safe, effective and also non surgical procedure. Fear of surgery for sterilization have deviated sterilization seeker to select quinacrine method.

Discussion :

The relative safety and efficacy of surgical method and non surgical quinacrine method of female sterilization have been reassessed.

Although experience with the quinacrine method is limited, it appears to have advantages fordevelopingcountries likeours. Itsfailure rate at one year **after** two insertion of 252 mg. of quinacrine pellets is approxi mately 3% (Zipper et al, 1985). In our study, failure sate is 1 .1%. Both of cases is under our antenatal check up.

Failure of the method leading to intrauterine pregnancy can be terminated **by** menstrual regulation. there is evidence that failure of the methods are not subject to increased risk of ectopic pregnancy as is the case with failure of surgical sterilization (Kessel et al, 1985) It is estimated that ectopic pregnancy accounts for one third sterilization mortality in country like Bangladesh (Begum SF). Whereas it accounts **for** less than 5% sterilization mortality in USA.

For potentiating the effectiveness of quinacrine we were adding Ibuprofen and ampicillin in a single insertion. However a survey of the literature reveals that two insertion of the pellets has never **been clinically** shown to be superior to single insertion (Kessel et al, 1985).

Ideally all clients need Hysterosal pingography for proving tubal blockage. But this is a costly investigation and majority are not interested to do so. Only two women presented promptly for the same. Both the pictures showed bilateral corneal block.

As assessment of risks and benefits is needed today for the quinacrine nonsurgical female sterilization method in view of high **rates** of meternal mortality and too rapid population growth of developing countries. But as the method now has equal efficacy with surgical sterilization it should be offered as an option to women requesting sterilization anywhere in the world. The day is probably not far off when the quinacrine pellet method will be recognized as the method of choice **for permanent sterilization.**

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