

EVALUATION OF THE EFFICACY OF BOER-MEISEL'S PROGNOSTICATION SYSTEM IN PREDICTING THE PREGNANCY OUTCOME IN PATIENTS TREATED FOR HYDROSALPINX

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ABSTRACT

Boer-Meisel's method of prognostication of outcome in patients undergoing tubal surgery for treatment of hydrosalpinx is being evaluated for its efficacy. It was found that the intra uterine pregnancy rates plummeted from 70% to 6.6% from "good" prognosis group to "poor" prognosis group. The overall intrauterine pregnancy rate was 30.6%. These results corroborated well with the Boer-Meisel's method underlining its utility in deciding tubal surgery or IVF-ET for patients with hydrosalpinx.

INTRODUCTION

Results of reconstructive surgery in patients with hydrosalpinx remain poor despite many variations in technique being used. It is the selection of patient for operation rather than surgical technique which is more important in determining the success of the procedure (Winston - 1982) Byeth and Bercovici 1982). In this days of alternatives like IVF-ET and allied assisted reproduction techniques being available, selection of the patient for such an operative procedure becomes critical. For the gynecologists it is now imperative to ask "Why to operate?" rather than "Why NOT to operate." For get-

ting an answer to this query, Boer-Meisel and Co-workers devised a scoring system (1986) to prognosticate the changes of a successful intra-uterine conception in patients with hydrosalpinx, following reparative surgery. This score, which is multifactorial and still essentially applicable on gross evaluation has been applied in the present study to evaluate its efficacy in predicting the prognosis of these patients.

The Boer-Meisel System (B-M Method)

Going through a very critical and tortuous path, these team of workers have scientifically evolved a score for patients of hydrosalpinx. Initially five characters were scored :

- (a) Extent of adhesions
- (b) Nature of adhesions

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- (c) Extent and diameter of hydrosalpinx
- (d) Macroscopic condition of endosalpinx
- (e) Thickness of the tubal wall

On basis of their score results, they conclusively proved that extent and diameter of hydrosalpinx have not got any significant role to play in the outcome and thus the remaining four factors were considered. Initially based on scores and subsequently only on basis of replies to queries that one may prospectively put to every case undergoing a repair, results & prognosis could be speculated.

MATERIAL & METHODS

49 patients subjected to tubal reconstructive surgery from January 1985 to December 1990 at the Department of Obst. & Gynec., Medical College and S.S.G. Hospital, Baroda were evaluated on the B-M method. The technique of surgery in all these patients was similar to that of Boer-Meisel et al (1986) and we also did not use the microscope though loupe was used in latter half of the period.

All patients were having an infertility of more than two years. They were all pre-operatively subjected to semen analysis, PCT, BBT, Cervical mucus studies, Laparoscopy & H.S. Graphy. All patients were similarly tackled intra-operatively except during latter part of the study hydrotubation was nearly given up.

On the basis of the parameters specified in the B-M method each was grouped as that with :

- (a) Good prognosis
- (b) Intermediate Prognosis
- (c) Poor prognosis

Success was considered when a patient had an intra uterine pregnancy. Though an abortion may not be a success for the patient but for the present tubal reconstructive surgery, it is obviously a success. Ectopic pregnancy or failure to conceive outright were considered as failure of the procedure.

RESULTS

49 patients who underwent a tubal reconstructive surgery for hydrosalpinx during the study

Table - I

Boer - Meisel's methods for prognostication

Questions to be asked	Possible Answers
1) Is the tube wall thin ?	Yes / No
2) Is the macroscopic condition of endosalpinx normal ?	Yes / No
3) Are there not many adhesions ?	Yes / No
4) Are these adhesions not fixed ?	Yes / No
Class	Criteria
(A) Good Prognosis	"Yes" to above question four times
(B) Intermediate Prognosis	"Yes" three times.
(C) Poor Prognosis	"Yes" two times or only once.

period were subjected to B-M method of prognostication.

It was found that amongst these 49, 10 fell in Group (A) (Good Prognosis), 24 in Group (B) (Intermediate Prognosis), and 15 in Group (C) (Poor Prognosis).

On following up these patients the outcome achieved as regards conception is as shown in Table III.

This table clearly highlights the efficacy of the prognostication system under evaluation.

Amongst those patients who were in "good prognosis" group - 70% had intrauterine pregnancy. Amongst patients who had intermediate prognosis 29.1% had intrauterine pregnancy, and amongst those with "poor prognosis" only 6.6% had an intrauterine pregnancy. Thus as the prognosis class worsens the chances of conception precipitously declines.

The overall intrauterine pregnancy rate in this study was 30.6.

Table - II

No. of Patients in Each Group (n = 49)

Group	No.	Rate of Success
(A) Good prognosis	10	70%
(B) Intermediate prognosis	24	29.1%
(C) Poor prognosis	15	6.6%

Table - III

Pregnancy Outcome in Relation to Prognostic Class

Preg. Outcome	Prognosis			Total
	Good	Intermediate	Poor	
Total No.	100% (10)	100% (24)	100% (15)	49
Full term	60% (06)	20.8% (05)	—	11
Abortions	10% (10)	8.3% (02)	6.6% (01)	4
Ectopic	—	25.04% (06)	13.3% (02)	8
Not concieved yet.	(30% (03)	45.84% (11)	79.2% (12)	26
Success rate in %	70% (07)	29.1% (07)	6.6% (01)	30.6%
Boer-Meise's figure	77%	33.3%	3%	28.7%

Figures in parenthesis denote actual number of cases

DISCUSSION

Through very rigorous scientific methods Boer-Meisel and co-workers (1986), after scoring each and every evaluated variable, evolved a scoring system for prognosticating the outcome in patients undergoing surgery for hydrosalpinx. Nearly all prognosticating studies were for quite some time based on a single factor. Obviously, with more factors brought in for the same, accuracy is likely to risk. This was one strong point of the present system that was evaluated. Also, the parameters included were simple enough for a reasonably experienced tubal surgeon to observe. This added to the simplicity and easy applicability of this method. Factors likely nature and extent of adhesions were known to effect the outcome as shown by Gomel (1980) and Hulka et al (1978). Similarly the macroscopic condition of endosalpinx and microscopic structure of ciliary epithelium was hinted by Vasquez et al (1980) and the extent of tubal damage by Shirodkar (1966). All the parameters of the present study were clinically observable ones and were grouped in the present score.

Results of the present study were in line of those prognosticated. Probability of success thus remains highest when the tubal wall is thin, macroscopically the condition of endosalpinx is

normal, there are not many adhesions and the adhesions are not fixed.

On the basis of this evaluation, it can be concluded that if the present criteria are applied to all patients undergoing such a repair, preoperative not only could the success rates be scientifically speculated and explained to the couple, but also unnecessary surgery on those with "poor prognosis" be avoided and they be offered alternatives like IVF ET. The corollary also holds true that those with a "good prognosis" need not be subjected right away to the much more costlier alternative of IVF-ET, instead surgical alternative be always offered and utilised for them.

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Table with multiple columns and rows, likely a data table or statistical summary, but the text is too faint to transcribe accurately.