SURGICAL MANAGEMENT OF STRESS URINARY INCONTINENCE

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SUMMARY

About 40% of middle aged women with or without genital prolapse suffer from Stress Urinary Incontinence (SUI) and in 10% it proves troublesome. With this in mind, 85 patients with genuine SUI were operated upon-Raz operation in 48 and Burch's operation in 35 respectively with a success rate at 1&1/2 years of 84% and 95.5% respectively. Traditional Kelly's repair was done in only 2 of the above 85 cases.

Advantages and disadvantages of the two procedures are analysed and plea is made to utilise these two operations more frequently in day-to-day practice by all gynaecologists.

INTRODUCTION

Urinary incontinence in the female has begun to attract wide interst as an increasingly common condition needing correct diagnosis, investigations and appropriate treatment.

About 40% of middle aged women with or without genital prolapse suffer from SUI and in 10% it is really troublesome, causing soreness and excoriation of vulva and making the patient's life distressingly uncomfortable.

The multiplicity of operations, designed for SUI and the frequency with which patients submit hopefully but not always successfully to repeated surgical attempts for this condition bear witness to an unsatisfactory state of affairs.

We, therefore, performed two types of operations which we thought were important operations for SUI on 83 patients and tried to bring out their advantages, disadvantages and

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place in our set up. Excepting 4 (SSK), all 83 operations were performed by the senior author.

MATERIAL AND METHOD

This study was carried out between March 1988 and July 1990 at the senior author's private Sir Hurkisondas Hospital and at K.E.M.Hospital respectively. A total number of 85 patients with demonstrable SUI were operated upon during this period. The uro-dynamic profile was done in 65 out of 85 patients, besides the routine preoperative investigations.Patients with obstructive airway disease or constipation were treated appropriately prior to surgery. It is necessary to have sterile urine prior to surgery.

Age of the patients varied from 30 to 65 years with parity between 1 to 6 except one who was a nullipara.

Excepting 14 patients, all the remaining patients consulted for menorrhagia due to varied conditions necessitating hysterectomy. Only direct questioning and examination for SUI confirmed the presence of stress urinary incontinence. and were exclusively operated for the same.

The operations performed were the Raz operation in 48, Burch's operation in 35 and Kelly's repair in 2 cases.

These operations were performed under spinal or general anaesthesia as deemed fit by the anaesthesiologist. Continuous post-operative catheter drainage was maintained for 5 days. After initiating bladder training, the catheter was removed. All patients were discharged only after residual urine was found less than 50 cc. Cystoscopy during operation was performed in only 3 cases. Mobilisation of the patient started on day 1 and gradually increased with stair climbing on days 3-4. Patients were advised to avoid sex life and heavy lifting for 6-8 weeks after surgery.

RESULTS

A total of 85 operations for genuine SUI were performed using number 2 or 1 prolene suture material. The Raz procedure proved quite easy except in 2 cases where it was difficult to enter the cave of Retzius vaginally.

Duration of hospital stay for all the patients varied from 6 to 18 days with an average duration of 5-7 days. In 13 patients, the hospital stay was unduly prolonged because of abdominal wound infection which may be due to generally poor health, poor nutritional status and improper aseptic conditions. Incidentally,

TABLE 1

AGE AND PARITY

Age group :	30 - 40 yrs.	40 - 50 yrs.	50 - 60 yrs.	61 & above
No. of patients	24	43	10	8
Parity	Nullipara	1 to 2	3 to 4	Above 4
No.of patients	1	3	67	14

all the above 13 were from K.E.M.Hospital. They had wound gaping with pyrexia postoperatively. Bladder trauma resulting in an opening of 2 cm. during the Raz operation occured in one private patient. This was sutured immediately and the patient had uneventful postoperative recovery therefter.

The complication of haematruia was fairly common in Burch's operation as seen in 17 out of 35 patients. This was expected due to the handling of the area of and around the bladder and was transient in all these cases. This did not affect the outcome adversely in Burch's operation.

All patients were followed up for a period ranging from 6 to 24 months and are still being followed.

The follow up of 18 months of 22 patients with Burch had a cure rate of 95.5% and 25 patients with Raz of 84% respectively as shown in Table-II.

TABLE 2

CURE RATE

Type of operation	Raz	Bruch	Kelly's
No. of patients followed upto 18 months	25	22	2
No. of patients cured at the end of 18 months	21 (84%)	21 (95.5%)	1 (50%)
No. of patients followed upto 6 months	21	10	–
No. of patients cured at the end of 6 months	20 (95.2%)	10 (100%)	–

DISCUSSION

By definition, 'Urinary Incontinence' is a condition in which involuntary loss of urine is a social or hygienic problem and is objectively demonstrable (Bates et al. 1983).

There are about 100 different types of operations described for SUI which in itself speaks for the confusion regarding the choice of operation.

However, in spite of the availability of so many operations, the basic principle is to elevate the urethra above the pelvic diaphragm and to repair the lax endopelvic fascia or pubovesicourethral ligament, i.e. elevate the bladder neck to make it abdominal.

Unfortunately, the commonest operation performed in our set up by most of the gynaecologists is Kelly's repair which has a failure rate of 40% or more and is difficult to repeat in previously failed cases. Hence the modest attempt of performing the other operations was made.

Advantages of the Raz & Burch's operations : Burch operation is preferred in the younger patients and Raz operation in an obese patient of older age group, or a frail patient, who is likely to lead a life of relatively restricted mobility.

In patients with uterine prolapse and

with cysto-recto-enterocele a Raz operation with the corrective anterior and posterior colpo-perineorraphy following vaginal hysterectomy become a method of choice. A few of these advantages have been summarised below :

Burch's Operation	Raz's Operation
1. More effective in severe SUI	1. Time of surgery less than 30 mts.
2. High permanent cure rate	2. Satisfactory cure rate
3. Less pain and peri and post operative mobidity	3. Duration of hospital stay not more than 3 days.
4. Satisfactory cure rate in cases with previously unsuccessful surgical attempts	4. Very small incision over abdomen.
5. Cystocele gets beautifully corrected	5. Correction of cystocele through the same approch
6. Needs adequate vaginal space and free mobility	6. Performed easily in obese patients.

This was also seen in our small series on whom the Raz operation was performed in which there was a success rate of only 84% at the end of 18 months.

Recurrence after Burch/Raz/ Kelly's operations : The recurrence of SUI after Burch and Raz operations is much less as compared to often performed Kelly's method. Failure rate reported with the Raz operation is more than 10%, whereas a success rate of more than 90-95% is reported at the primary attempt at the end of 5 years with the Burch operation (Stanton 1990).

An objective cure rate as reported by Stanton for Kelly's is only 54% at the end of 2 years. Clinical evidence that the pelvic floor is severely affected is an adverse sign for successful vaginal surgery and is one of the commonest causes of a failed Kelly's repair. To improve the outcome of any SUI surgery patient should avoid further pelvic floor damage with vaginal delivery by not planning future pregnancies.

Place of uro-dynamic profile : Though in 65 patients of the present series, urodynamic study was performed, one need not avail of it (considering the cost) if SUI is convincingly demonstrable on a full bladder. However, these studies are mandatory in cases doubted for detrusor instability.

Comparative study : A comparative study shows the cure rates of the vaginal suspension operation for a period of 6 months to 9 years as shown in Table-3 (Karman & Bhatia 1989). Ideal follow up period is 2 years extending up to 5 years.

Place of hysterectomy : Hysterectomy should not be performed unless gynaecologically indicated as in the present series. Hysterectomy should be first performed fol-

TABLE 3

COMPARATIVE STUDY OF VAGINAL SUSPENSION OPERATION

Results of	Total No. of patients	Cured	% age	Follow up
1. Pareyra - Lebheiz	210	198	94	12 months
2. Partinuff Ballan	186	170	91	1 - 5 yrs.
3. Becker Probst.	199	163	82	6 months - 9 yrs.
4. Stamey	203	284	91	6 months +
5. Raz	200	96	96	–
6. Bhatia & Bergman	20	17	85	12 months
7. Present series	25	21	84	18 months

lowed by SUI repair in both the Raz and Burch operations. If a posterior repair is required, this is carried out last. Today the colposuspension by suprapubic approach has become the operation of choice (Burch 1961). Burch called it as urethrovesical suspension. The cure rate of this operation at 5 years is 91% (Stanton 1982). Stanton reports that an objective cure rate of 90-95% for a primary attempt and upwards of 80-85% for a second attempt should be ideal(1990). Raz procedure does not achieve the long-lasting 90% or higher success rate claimed by Raz (Stanton 1990).

Place of cystoscopy : In the present series, cystoscopy was performed only in 3 cases of the 85, mainly due to nonavailability of cystoscope and lack of experience. The senior author, however, strongly feels that the gynaecologist, unlike urologists, from vast experience of anterior colporraphy have a sound and firm idea as to the depth of the bladder wall from the fascia and hence can determine the exact location of placement of helican sutures in Raz operation. This is mainly due to the vast experience of anterior colporraphy which is totally missing with urologists.

CONCLUSION

Eighty five cases of genuine SUI were treated successfully over a period of almost two years. Various operative techniques were analysed before subjecting patients to mainly two operations, namely Raz and Burch. Follow up of these patients was from 6 to 24 months.

A success rate of 84% with Raz and 95.5% with Burch was achieved up to 18 months in the present series. o73

A sincere plea is thus made to specifically look for genuine stress urinary incontinence in all women who are scheduled for hysterectomy or allied gynaecological surgery and manage the SUI better by deviating beyond Kelly's repair.

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REFERENCES

1. *Bates C.P.,Bradley W.E.,Alen E. (1983)-Standardization of terminology of lower urinary tract-prenetion collation of first 4 reports by the standardization committee of the International Continence Society.*
2. *Burch Urethrovaginal fixation to Cooper ligament for correction of stress incontinence cystocele of prolapse, AmJ.Obst. & Gynecol. 81, 281-1961.*
3. *Karman & Bhatia, AmJ. of Obst. & Gynec. 1989, 73,*
4. *Stanton S.L.Hertogs H,Cox C,Hifon P, Cardozo L.(1982). Proceedings of the 12th Annual meeting of the International Continence Society, London, 94 - 96.*
5. *S. Stanton - Clin Obstet & Gynec 33, 346 -1990.*