

## CONCEPT AND DEVELOPMENT OF GYNAECOLOGICAL UROLOGY IN INDIA

by

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### Introduction

A woman with symptoms arising from the lower urinary tract usually seeks help from her primary care physician, her gynaecologist. However, since problems arising from this area have not usually been thought to be within the province of classical gynaecology, many gynaecologists have been slow to respond to their patients needs. Urologic referral frequently fails to provide patient satisfaction.

Moreover, several problems compound diagnosis and therapy of the lower urinary tract and therefore it is not uncommon for a patient to have more than one problem arising simultaneously from this area and so it is important to proceed in an orderly manner with the diagnosis and management. Furthermore, the area and the anatomy of the lower urinary tract are familiar to the gynaecologist. Therefore, the gynaecologist should develop whatever skills are required for evaluation and possible treatment of the lower urinary tract.

In India, there are no systematic works available in this field till now, hence diagnosis and management are usually erratic with incomplete response of the patient. Because of incomplete apprecia-

tion of the problem, at times they are labelled as psychotic and referred to the psychiatrist.

Most problems associated with the lower urinary tract in the female can be categorised as follows:

- (a) Inflammation—with or without evidence of infection.
- (b) Bladder irritability—with or without incontinence.
- (c) Incontinence only.

When urine culture is negative cases are classified on the basis of specific symptoms as urinary bladder irritability with or without incontinence or incontinence only.

The key anatomic defect involved in stress incontinence is the loss of the posterior urethro-vesical angle. Jeffcoate and Roberts (1952) were among the first to call attention to the importance of the anatomical configuration of the urethro-vesical junction and the proximal urethra to the continence mechanism. Hodgkinson (1953) employing the metallic bead chain cysto-urethrography technique on continent and incontinent women reached essentially the same conclusion.

The emphasis on stress incontinence (S.U.I.) of urine which has characterised gynaecologic conferences and literature during the last 40 years has tended to distract attention from the equally important female complaint of painless urgency incontinence resulting from indisciplined, uninhibited detrussor muscle activity, variously termed as 'Detrussor

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instability" or perhaps more accurately "Detrussor Dys-synergia" (D.D.S.). It is psychosomatic and functional in origin in atleast 50-80% of cases (Green 1975).

Patients with incontinence only or without incontinence which persists following treatment of other lower urinary tract problems should be evaluated by a cystometry because it provides considerable information about the detrussor activity.

Patients in whom cystometric findings are normal should be followed up with chain cysto-urethrogram for bladder-urethra configuration. If this is normal then incontinence is most likely due to psychosomasis and needs psychiatric consultation.

Keeping the above concept in mind, gynaecologic urology clinic was set up in the department of Obstetrics and Gynaecology, PGIMER, Chandigarh in October, 1977. All cases with lower urinary tract problems were referred from the general OPD to this clinic for systematic evaluation and management.

#### Material and Methods

A total of 145 cases with lower urinary tract problems attended the Gynaecologic Urology Clinic from October, 1977 to August, 1979. An attempt was made to find out the incidence of various lower urinary tract diseases, their underlying basic etiologic factors and after institution of specific treatment the patients were followed up to evaluate the efficacy of such therapy. Cases of VVF were excluded from the study and patients with specific bladder diseases were referred to urologist for management.

#### Methods

1. Detailed clinical history, including history of hormone or drug therapy.

2. Neurological and psychiatric examination when indicated.
3. Routine urine examination, including urine culture and sensitivity after proper collection.
4. Routine serum biochemical analysis.
5. Cystometry and urethral pressure profile.
6. Cystoscopy.
7. Pyelography whenever indicated.
8. Metallic bead chain cysto-urethrography.
9. Hormone assays with lateral vaginal smears.

#### Observation

Table I shows analysis of 145 cases who attended gynaecological urologic clinic

TABLE I  
Distribution of Cases

Disease	No. of Cases*	Percentage
1. Urinary tract infection	69	47.5
2. Dysuria (idiopathic)	17	11.7
3. Urinary incontinence	50	34.3
4. Tight Urethra Syndrome	8	5.5
5. Urethral caruncle	4	2.7
6. Vesical calculi	2	1.3
7. Neurogenic bladder	3	2.07
8. Urethral diverticula	1	0.7

\*Some patients had more than one pathology.

during the study period. Urinary tract infection formed most common cause of urinary difficulties. Out of total 69 (47.5%) cases, in 33 (47.8%) cases only, the offending organisms could be isolated from urine culture. In 36 cases (52.2%) repeated urine culture were negative, but there was persisting pyuria. Seventeen of these 36 cases were associated with cervicitis or vaginitis.



There were 50 (34.3%) cases of urinary incontinence of various origin in the present study. The break-up figure of these incontinences is shown in Table II. There were 17 (11.7%) cases of idiopathic dysuria who did not show any evidence of infection with repeated urine examinations. But cystoscopy in these patients showed chronic inflammatory changes (non-bacterial type).

There were total of 8 (5.5%) cases of bladder neck obstruction or tight urethra syndrome with urinary frequency or urgency. Two (1.3%) cases of vesical calculi were referred to general urology for management.

Table II shows break-up of total cases of urinary incontinence. Out of total 50

TABLE II  
Analysis of Urinary Incontinence (50 Cases)

Urinary incontinence	No. of cases	Percentage
Stress incontinence	34	68.0%
Detrussor dys-synergia	12	24.0%
Mixed incontinence (both stress and urge)	4	8.0%

cases, 34 (68.0%) cases suffered from stress incontinence alone. Twelve (24.0%) cases showed detrussor instability with cystometry. Four (8.0%) cases belonged to mixed incontinence with both stress and urge components. Thus there were total of 38 cases of stress incontinence.

Table III shows association of various factors with stress incontinence in the present study. Out of total 38 cases of stress incontinence, seventeen (44.7%) cases were associated with genital prolapse of various degrees.

TABLE III  
Factors Predisposing Stress Incontinence (38 cases)

Factors	No. of cases	Percentage
Prolonged labour	5	13.1
Obesity	9	23.6
Chronic lung disease	6	15.7
Genital prolapse	17	44.7

E. Coli infection formed the single major group in culture, positive cases of urinary tract infection (Table IV).

TABLE IV  
Organisms From Culture Positive Urine (33 cases)

Organisms	No. of cases	Percentage
E. Coli	23	69.6
Kliebsella	6	18.2
Bact. Anitratum	2	6.0
Pseudomonas	1	3.0

Discussion

A total of 145 cases of lower urinary tract problems were systematically analysed in the gynaecologic urology clinic from October, 1977 to August, 1979. By far the most common cause of lower urinary tract problems was urinary tract infection. There were 69 (47.5%) cases of urinary tract infection, out of which 33 (47.8%) cases were confirmed with positive urine culture. In the rest, repeated cultures showed absence of any organisms but persistence of pyuria. These cases showed equally satisfactory results with urinary antiseptics and analgesics. Following treatment the urine was free of pus cells. The nature



of organisms in the positive culture cases is shown in Table IV. There were 17 (11.7%) cases of dysuria without any evidence of pyuria or organisms, inspite of repeated urine examinations. Cystoscopy performed in these cases showed chronic inflammatory changes in the trigone and urethra (non-bacterial type). The same observations were reported in the literature by Semple (1956) and Jeffcoate and Francis (1966). In some of these cases there was evidence of mucosal atrophy of urethra, trigone and vagina. Treatment with oestrogen in these patients gave satisfactory results.

Most common cause of abnormal leakage of urine was found to be true stress incontinence, secondary to a rather characteristic abnormality of the normal support of the vesical neck and proximal urethra. In this study, stress incontinence accounted for 34 (68.0%) of the total cases of urinary incontinence. This finding is in accordance with Green (1975). The incidence of Detrusor dys-synergia (D.D.S.) was found to be 12 (24.0%) of all patients with urinary incontinence. All these cases belonged to the perimenopausal age group with various psychosomatic backgrounds. All the cases of S.U.I. were multiparous ranging from para 2 to para 6. Associations of various factors with stress incontinence is shown in Table III. In 17 (44.7%) cases there were genital prolapse of various degrees. There were 4 (8.0%) cases of mixed incontinence where women suffered from both S.U.I. and detrusor instability where the residual S.U.I. was treated after tackling the detrusor instability (Table II).

There were 8 (5.5%) cases of frequency and urgency where the diagnosis of tight urethra syndrome (Roberts and

Smith, 1976) was made. Cystoscopy in these patients was essentially normal but some resistance was felt at the bladder neck. Repeated urethral dilatations relieved these cases. Seven out of 8 cases belonged to the perimenopausal age group with good oestrogenic status. According to Youssef (1959) and Bennett-Jones (1962) senile women some times failed to empty the bladder completely and this is the result of atrophy and weakness of the detrusor muscle and not of unusual resistance at the level of the bladder neck.

Diverticulum of the female urethra is a rare disease. Newland *et al* (1970) reported 10 cases in 50,000 surgical procedures. There was only 1 case presented in this clinic with recurrent urinary tract infection and large suburethral lump. This patient underwent transvaginal excision of the diverticulum with complete relief. However, though marsupialization of large diverticulum has been described, but there is a great danger of causing urethrovaginal fistula and hypospadias type of urethral meatus (Spence and Duckett 1970).

Treatment of S.U.I. was dependent on the findings of chain cysto-urethro-gram. Most of the cases required only Kelly's repair with or without concomitant hysterectomy. Only 2 cases required abdominal cysto-urethroprexy. None have required sling operation so far (Table V).

Cases of D.D.S. were treated with tranquilisers, timed voiding and Probanthene. Initially the treatment was given for 3 months and future treatment varied according to the response. All patients in these group except 1 showed satisfactory results with this regime.

TABLE V  
Analysis of Treatment

Modalities of Treatment	No. of cases*	Percentage
I. Conservative	101	69.5
II. Surgical	37	25.5
(i) Kelly's repair of bladder neck	22	59.4
(ii) M.M.K. Repair	4	10.8
(iii) Excision and repair of urethral diverticula	1	2.7
(iv) Dilatation of urethra	8	21.6
(v) Cautery of caruncle	4	10.8
III. Treatment (Surgery) awaited	5	3.4
IV. Referred to general urology	2	1.3
V. Lost from management	9	6.2

\*Some patients had more than one mode of treatment.

On follow up, all the patients treated so far were found to be continent both on clinical and radiological evaluation.

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