URINARY TRACT CHANGES IN GENITAL PROLAPSE—BEFORE AND AFTER SURGICAL CORRECTION

by

P. Tiwari
H. Khullar
and
N. R. Agrawal

SUMMARY

This study was done in 50 cases of prolapse before and after repair to see the radiological evidences of urinary tract changes. The incidence of changes was 40% and these were directly related to the degree and duration of the prolapse and age of the patient. Forty per cent patients complained of stress incontinence but radiological evidence of it was found only in 26.09%. The effects affiicted on urinary system by genital prolapse became normal after the correction of prolapse except persistence of hydronephrosis in two cases.

Introduction

The close and firm anatomical relationship between the urethra and vagina and the more loose but definite contact between the bladder on one side and vagina and uterus on the other makes it clear that a dislocation of the genital organs as happens in prolapse uterus must affect the bladder and/or urethra.

In the present study, we have attempted to find the incidence of changes in urinary tract, in cases of genital prolapse, in relation to the duration and severity of prolapse and whether these changes revert back to normal after prolapse repair.

From: Department of Obstetrics and Gynaecology, Institute of Medical Sciences, Banaras Hindu University, Varanasi-221 005.

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Material and Method

Fifty patients, having uterine prolapse of varying degree, belonging to different age groups and parity and with varying symptoms, attending the University Hospital, Varanasi, constituted the material for study. A detailed medical history was recorded and clinical examination was done to see the severity of the condition. In addition to the routine investigations intravenous pyelography (IVP) and cystourethrography were also done. After IVP a simple catheter was introduced and the bladder was evacuated, taking care not to push the catheter too far into the bladder. Through the catheter about 150-200 cc. of 30% sodium iodide solution was injected into the bladder. The catheter was clamped and fixed to the thigh. Postero-anterior (P-A) view of

bladder and urethra were taken in erect position and erect-lateral view of bladder and urethra at rest and during straining were taken. Care was taken to include the tip of the sacrum posteriorly and pubic symphysis anteriorly to measure the displacement of the bladder. Distance from the lowest point of bladder to the upper margin of symphysis pubis, in cms., on P-A view was measured to know the degree of cystocele. Posterior urethrovesical angle (PUV) was also measured. These investigations were repeated 6 weeks after operation in whom urinary tract changes were present pre-operatively.

Observations

In total, 20 (40%) out of 50 cases of prolapse showed one or the other type of changes in IVP. The incidence of urinary tract changes increased with the increasing degree of prolapse. It was 70% in 3rd degree prolapse and 100% in procidentia (Table I). When the urinary tract changes were studied in relation to the age of the patients, the number of the patients were few in the fifth decade and beyond, but the frequency of urinary tract changes were maximum in the advanced age groups (Table II). The incidence of urinary tract changes increased with the increasing duration of prolapse as well. It was 80% when the duration was more than 10 years (Table III).

Unilateral hydronephrosis and hydroureters was seen in 24% and 20% cases respectively as a sequelae of prolapse (Table IV). In 18% cases a serious back pressure change i.e. bilateral hydronephrosis, was found (Fig. 1). In 2 out of 6 cases, showing hydronephrosis, these changes persisted after repair but rest of the changes returned to the normal (Table V).

TABLE I

Degree of Prolapse and Urinary Tract Changes

Degree of prolapse	No. of cases	Cases with urinary tract changes	Percentage
First degree	10	—	—
Second degree	16	2	12.5
Third degree	20	14	70.0
Procidentia	4	4	100.0
Total	50	20	40.0

TTBLE II

Age and Urinary Tract Changes in Prolapse

Age group (Years)	No. of cases	Cases with urinary tract changes	Percentage
21 - 30	21	3	14.29
31 - 40	16	9	56.25
41 - 50	6	4	66.67
51 - 60	5	2	40.00
61 or more	2	2	100.00
Total	50	20	40.00

TABLE III

Duration of the Prolapse and Urinary Tract Changes

Duration (Years)	No. of cases	Cases with urinary tract changes	Percentage
Less than one year	5	1	20.00
1 - 5	20	4	20.00
6 - 10	15	7	46.67
More than ten years	10	8	80.00
Total	50	20	40.00

TABLE IV

Unilateral Urinary Tract Changes in Intravenous Pyelography—Before and After Surgical Correlation

Changes	Pre-operative		Pre-operative	
	No. of cases	%	No. of cases	%
Hydronephrosis	12	24.0	—	—
Hydroureter	10	20.0	—	—
Dilatation of pelvis	2	4.0	—	—
Dilatation of calyces	2	4.0	—	—
Ptosis of kidney	2	4.0	—	—
Impaired renal excretion	3	6.0	—	—

TABLE V

Bilateral Urinary Tract Changes in Intravenous Pyelography—Before and After Surgical Correlation

Changes	Pre-operative		Post-operative	
	No. of cases	%	No. of cases	%
Hydronephrosis	6	12.0	2	4.0
Hydroureter	9	18.0	—	—
Dilatation of pelvis	2	4.0	—	—
Dilatation of calyces	2	4.0	—	—
Ptosis of kidney	2	4.0	—	—
Impaired renal excretion	1	2.0	—	—
Vesical calculas	1	2.0	—	—

On studying cystourethrograms, 26 (52%) out of 50 cases had a distance of 2.5 to 3.0 cms. between the lower level of urinary bladder and the upper border of symphysis pubis, indicating mild degree of cystocele, whereas in rest of the patients it was more than 3 cms. indicating moderate to massive cystocele. After surgical correction, in 18 cases it returned to normal whereas it was between 2.5 to 3.0 cms. in 2 cases, showing that mild cystocele persisted in them after repair (Table VI).

Normal PUV angle was found in 34 (74.91%) out of 46 patients with prolapse whereas in 12 (26.09%) it was

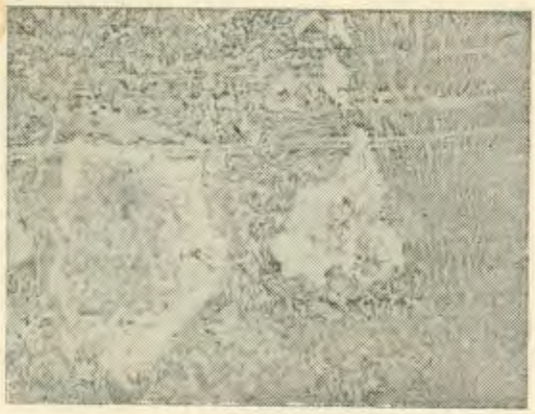

Fig. 1
Shows cystic cavities of various size and endothelial lined channels.

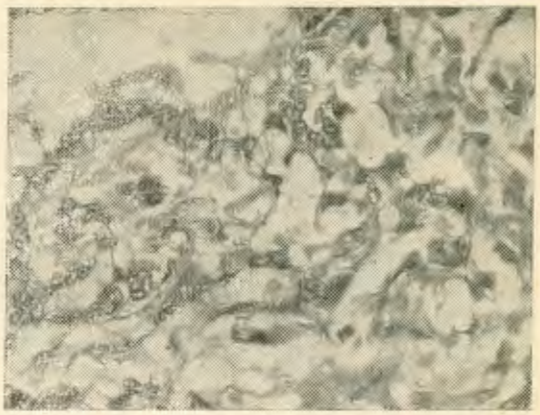

Fig. 2
Showing higher magnification of the cavities.

Fig. 3
Showing glomeruli like elements in the tumor.

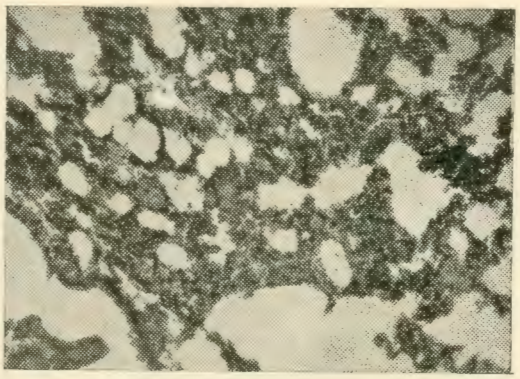

Fig. 1
Lungs showing alveolar dilatation.

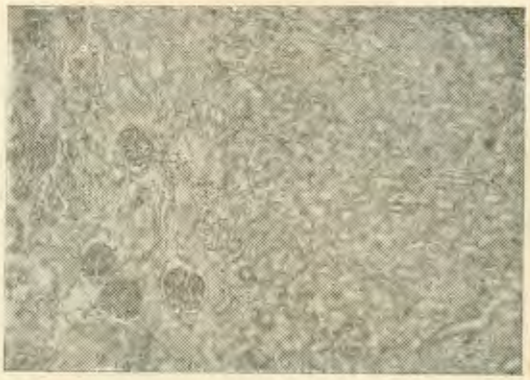

Fig. 2
Kidney showing congestion and shrinkage of renal tubules.

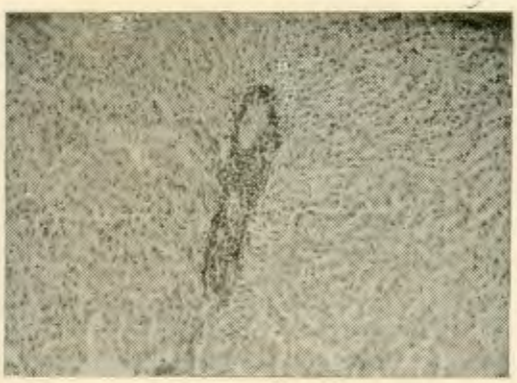

Fig. 3
Liver showing congestion and mononuclear cells.

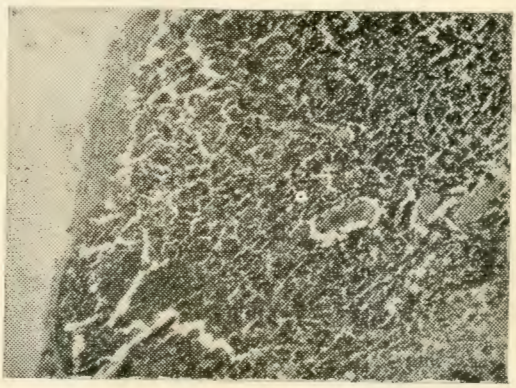

Fig. 4
Congested capillaries in the spleen.