Results

The study enrolled 60 patients recruited from gynaecology & urology out patient clinics of Benha Faculty of Medicine, they were divided into three groups.

- 1st group: Twenty patients in whom subtotal abdominal hysterectomy was performed
- 2nd group: Twenty patients in whom total abdominal hysterectomy was performed.
- 3rd group: Twenty patients in whom vaginal hysterectomy was performed.

I – the social demographic characters

The age of the study group**.** I ranged from (38 – 60) years, with an average of 47.4± 6.3 years.

The age of study group**.** II ranged from (35 – 53) years with an average 46.6± 5.04 years.

The age of study group III ranged from (40 – 60) years. With an average 49.6± 4.8 years.

In our study we studied the effect of patient age as a modifer of the effect of hysterectomy on urinary in continence and we found no significant difference (P > 0.05) between age groups as regard the outcome of the hysterectomy operations.

The mean parity of group I was 3.9 ± 1.4 with range 0 – 7, the mean parity of group II was 4.2± 2.1 with range 0 – 10 whereas the mean parity of group III was 4.8 ± 1.1 with range 3 – 7.

The number of vaginal delivers in group I, II, III were 18,18,19 respectively.

The number of C.S in group I, II and III were 2, 2, 1 respectively.

Table (8): distribution of the study group according to age, WT and parity:

	Mode of hystrectomy	Mean± SD	Range	f	p
Age	Subtotal	47.4±6.3	38-60	1.6	>0.05 NS
	Total	46.6±5.04	35-53		
	Vaginal	49.6±4.8	40-60		
WT	Subtotal	78.2±6.3	65-90	4.8	<0.05 S
	Total	74.8±4.3	69-83		
	Vaginal	72.9±5.8	63-87		
Parity	Subtotal	3.9±1.4	0-7	1.6	>0.05 NS
	Total	4.2±2.1	0-10		
	Vaginal	4.8±1.1	3-7		

Table (1) showed that there was significant difference between the studied groups regarding the wt ($P < 0.05$)

Table (9): distribution of the study group according to mode of delivery:

	CS	NVD	Total	X^2	p
Subtotal	2	18	20	0.5	>0.05 NS
Total	2	18	20		
Vaginal	1	19	20		

Table (1) and (2) showed that there were not significant difference between the studied groups regarding age, parity & the mode of delivery (P value > 0.05)

Number of patients in group I with concomitant salpingo – oophrectomy was 9 patients (7 bilateral, 2 unilateral), in group II 13 patients (7 bilateral, 6 unilateral) whereas no patients with salpigo – oophrectomy in group III.

Table (10): distribution of the study group according to salpingo-ophrectomy:

	No	BSO	USO	Total	X^2	p
Subtotal	11	7	2	20	21	<0.05 S
Total	7	7	6	20		
Vaginal	20	0	0	20		

This table showed that there was significant difference between the studied groups regarding the salpingo – oophrectomy (P value < 0.05)

Table (11): distribution of the study group according to indication of surgery:

	Subtotal	Total	Vaginal
Fibroid	12	11	0
PMB	3	0	0
2nd degree prolapse	0	0	15
Complete Procedentia	0	0	5
Peri MB	4	6	0
Chronic Pelvic pain	1	0	0
cx. polyp	0	1	0
Ov. Cyst	2	1	0
Ov. Mass	0	1	0
Endometrial. Hyperplasia	0	2	0
Bulky uterus.	1	1	0

PMB: post menopausal bleeding ,Peri MP = peri menopausal bleeding

II- stress incontinence before and after hysterectomy

Number of stress incontinent women before and after two, six and twelve months after hysterectomy were:

Three women from the (VH) group had SI before the operation. Two months after, SAH, TAH and VH the number of patients with SI were 2, 1,1 respectively. As two cases from VH group were cured. Six months later number of patients was one case from the two case of SAH group was cured.

Whereas twelve months later the results were the same of six months follow up. Except for VH group 2 new patients appeared to have SI.

Table (12): SI cases with SAH:

Before	After 2 m	After 6 m	After12m
0	2	1	1

Z1 (between before and after 2 m) = 1.5 (NS)
Z2 (between before and after 6 and 12 m) = 1.02 (NS)

Table (13): SI cases with TAH:

Before	After 2 m	After 6 m	After12m
0	1	1	1

Z1(between before and after2, 6 and 12 m) = 1.02 (NS)

Table (14): SI cases with VH:

Normal cases				Cases with SI				X^2	P
Before	After			Before	After				
	Month	Persistent normal cases	Cured cases		Month	Persistent cases with SI	New cases with SI		
17	2	15	2	3	2	1	2	1.3	>0.05 NS
	6	15	2		6	1	2		
	12	15	2		12	1	2		

Tables 5, 6, 7 showed that there were insignificant difference between the studied groups regarding SI before and at two, six and twelve months of follow up.

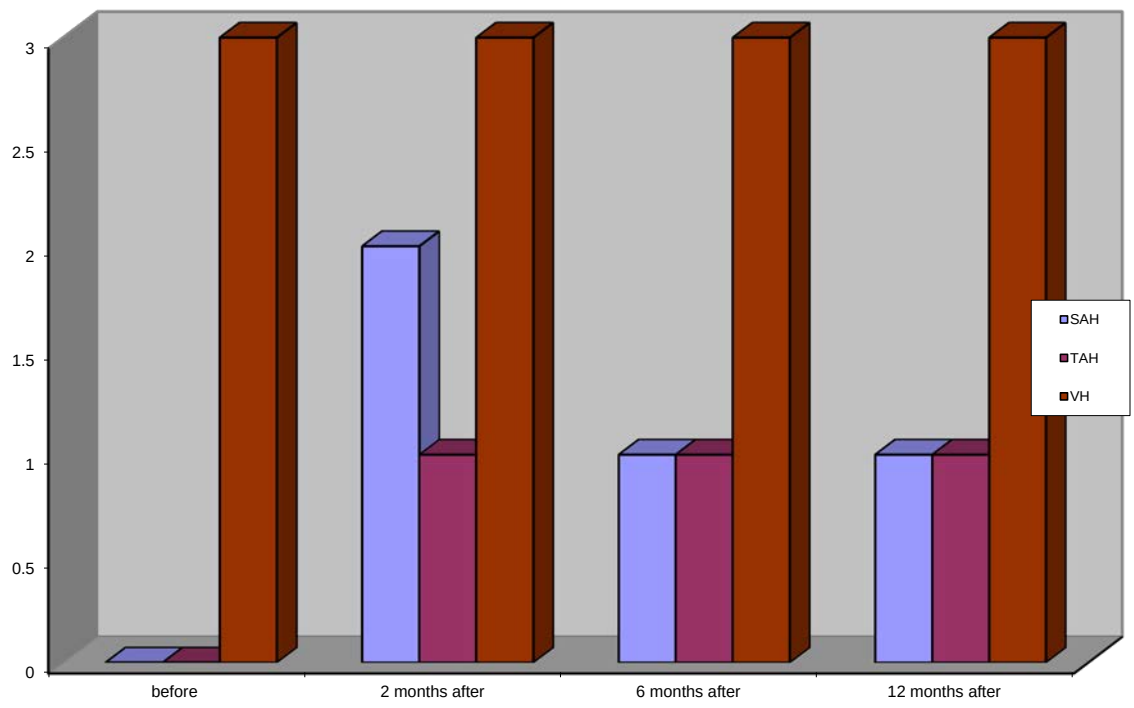

Fig (40) Time – specific proportions of stress urinary incontinent women by operation method. SAH: subtotal abdominal hysterectomy. TAH: total abdominal hysterectomy. VH: vaginal hysterectomy

III- urodynamic evaluation:

The results of urodynamic studies performed 300 times in the 3 groups. Five patients(two patients who could not void in the preoperative test in the VH group, two patients for whom a problem occurred in testing before the operation in the TAH group and one patient for whom a problem occurred in

testing at 12 months after operation in SAH group were not included in the urodynamic analysis).

Table (15): urodynamic evaluations according to different types of hysterectomy

parameter	Op. type	Before	6w after	3m after	6m after	12m after	f	p
Max FlowRate(MFR) (ml/min) **(mean ±SD)**	Subtotal	22.9±2.8	23.1±3.1	23±2.5	22.4±3.8	22.6±3	0.3	>0.05 NS
	Total	22.8±2.6	21.7±3.5	21.9±2.8	23.6±2.8	23.3±2.7	1.6	>0.05 NS
	Vaginal	21.5±3.4	22.3±2.7	23.4±3.1	21.6±2.8	21.4±3.3	0.7	>0.05 NS
Max.cystom.Capacity (MMC) (ml) **(mean ±SD)**	Subtotal	517.2±23.4	520.8±7.6	516.5±24.4	515.4±22.5	515.4±24.5	0.3	>0.05 NS
	Total	514.8±28.8	516.8±25.7	511.9±34.3	514.6±22.9	512.6±23.7	0.1	>0.05 NS
	Vaginal	510.8±33.1	506.6±36.5	512.4±31.1	509.3±31.8	507.2±30.9	0.4	>0.05 NS

Table (16): valsalva leak point pressure before and after surgery.

parameter	Op. type	Before		6w after		3m after		6m after		12m after		X^2	p
		+ve	-ve	+ve	-ve	+ve	-ve	+ve	-ve	+ve	-ve		
VLPP	**Subtotal**	0	20	2	18	2	18	1	19	1	19	11.1	>0.05 NS
	Total	0	20	1	19	1	19	1	19	1	19		
	Vaginal	3	17	3	17	3	17	3	17	3	17		

There Was No Significant Differences In Maximum Cysto-metric capacity maximum flow rate and valsalva leak point pressure before the operations and at 12 months after the operation in the 3 study group. ($P > 0.05$)

IV- Lower urinary tract symptoms before &after hysterectomy:

Number of women suffering from lower urinary tract symptoms (LUTS) distributed according to operation method.

Table (17): results of urinary sympt. Before and after:

Opera.. / Sympt.	SAH (n = 20)	TAH (n = 20)	VH (n = 20)	P VALUE
Frequency:				
Before	2	1	3	
After:				
• 0 M	6	4	3	>0.05
• 6 M	4	2	1	NS
• 12 M	3	1	1	
NOCTURIA:				
Before	0	0	1	
After:				
• 0 M	2	4	3	>0.05
• 6 M	1	2	1	NS
• 12 M	1	1	1	
Incomplete empty:	0	1	4	
Before				
After:				>0.05
• 0 M	6	7	5	NS
• 6 M	3	5	3	
• 12 M	2	4	1	
Dysuria :				
Before	1	2	2	
After:				
• 0 M	0	0	1	>0.05
• 6 M	0	0	1	NS
• 12 M	0	0	1	
SI:				
Before	0	0	3	
After:				
• 2 M	2	1	3	>0.05
• 6 M	1	1	3	NS
• 12 M	1	1	3	
urgency:				
Before	0	0	6	
After:				
• 0 M	2	3	4	>0.05
• 6 M	0	1	2	NS
• 12 M	0	1	2	

Table 10 showed no significant differences were observed between the 3 groups regarding LUTS (P> 0.05).

In the first group 2 cases complaint of urgency soon postoperatively with follow up. The two cases were cured with medical treatment. In the 2nd group 3 cases complaint of urgency at 0 months, two cases cured and one case improved at 12 months. In the 3rd group 4 patients with urgency at 0 month at 12 months 2 cases cured and 2 cases improved.