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THE COMPARISON OF ARTIFICIAL URINARY SPHINCTER IMPLANTATION AND ENDOURETHRAL MACROPLASTIQUE INJECTION FOR THE TREATMENT OF POSTPROSTATECTOMY INCONTINENCE.

Hypothesis / aims of study: To compare the effectiveness of macroplastique injection with artificial urinary sphincter implantation (AUS) for treatment of postprostatectomy incontinence (PPI).

Study design, materials and methods: A prospective randomized clinical trial including 45 patients with PPI was performed secondary to radical retropubic prostatectomy (RRP), transvesical prostatectomy (TVP), transurethral prostatectomy (TURP), and TURP with TVP, in 12, 16, 16, 1 patients respectively. Patients were divided into two groups as minimal (group I) and total incontinence (group II) according to the severity of incontinence. Respectively, Group I (n = 21) and group II (n = 24) patients were randomized as AUS implantation (n = 11, n = 11) and macroplastique injection (n = 10, n = 13). Follow-up period was 48 (6-84) months in patients with macroplastique injection and 60 (8-120) months in AUS implantation. The success of the treatment was evaluated by calculating the average number of pads used by the patient per day, the weight of the pads and score of quality of life survey scale for each group both in the preoperative and in the postoperative period.

Results: The success rates after treatment were shown at table 1. There were statistically significant differences between preoperative and postoperative average pad weight, average number of pads and quality of life scores, both in patients with minimal and total incontinence. In group I, there was no statistically significant difference between the two techniques (table 2). However, in group II there was a significant difference favouring AUS implantation (table 3). Also, we have identified that for patients developing incontinence after TURP, submucosal injection therapy was of considerable success, whereas it was less successful in cases that developed incontinence due to open surgical procedures (table 4 and 5).

Interpretation of results: The degree of PPI is the most important parameter determining the success of the treatment modality chosen. Endourethral injection should be the treatment of choice for patients with minimal incontinence, whereas AUS implantation should be considered as the first choice for patients with total incontinence. Furthermore, the authors conclude that endourethral injection should be the first choice in patients with incontinence after TURP, and AUS implantation should be offered to patients experiencing incontinence after open surgical procedures.

Concluding message: Endourethral injection should be the treatment of choice for patients with minimal incontinence, whereas AUS implantation as the first choice for patients with total incontinence.

Table 1. The distribution of patients according to the severity of incontinence and success rate of treatment modalities.

	Group 1		Group 2	
	Injection	AUS	Injection	AUS
Patients	10	11	13	11
Dry	8 (80%)	10(90.9%)	3(23.1%)	8(72.7%)
Socially continent	1 (10%)	1(9.1%)	5(38.5%)	2(18.2%)
Incontinent	1 (10%)	-	5 (38.5%)	1 (9.1%)

Table 2. The comparison of treatment modalities according to success criteria in group 1.

	Macroplastique injection			AUS implantation		
	Preop	Postop	p	Preop	Postop	P
Average number of pads	1,52	0,34	<0.001	1,33	0,09	<0.001
Average pad weight (gm)	84	20.2	<0.001	76.3	4.1	<0.001
Quality of life scale	29.9	8.95	<0.001	26.75	6.81	<0.001

Table 3. The comparison of treatment modalities according to success criteria in group 2.

	Macroplastique injection			AUS implantation		
	Preop	Postop	p	Preop	Postop	P
Average number of pads	2.46	1.41	<0.001	2.27	0.36	<0.001
Average pad weight (gm)	174.2	98.6	<0.001	153.1	25.9	<0.001
Quality of life scale	33.75	20.05	<0.001	33.3	9.2	<0.001

Table 4. The success rate of treatment modalities according to etiology in group 1.

Etiology	Patients			Dry			Socially continent			Incontinent		
	Inj.	AUS	Total	Inj.	AUS	Total	Inj.	AUS	Total	Inj.	AUS	Total
TURP	4	3	7	3	3	6	1	-	1	-	-	-
TVP	4	4	8	3	4	7	-	-	-	1	-	1
RRP	2	3	5	2	2	4	-	1	1	-	-	-
TURP-TVP	-	1	1	-	1	1	-	-	-	-	-	-
Total	10	11	21	8	10	18	1	1	2	1	-	1

Table 5. The success rate of treatment modalities according to etiology in group 2.

Etiology	Patients			Dry			Socially continent			Incontinent		
	Inj.	AUS	Total	Inj.	AUS	Total	Inj.	AUS	Total	Inj.	AUS	Total
TURP	6	3	9	2	2	4	2	1	3	2	-	2
TVP	5	3	8	1	3	4	2	-	2	2	-	2
RRP	2	5	7	-	3	3	1	1	2	1	1	2
Total	13	11	24	3	8	11	5	2	7	5	1	6

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Is this a clinical trial?	**Yes**
Is this study registered in a public clinical trials registry?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Diskapi Yildirim Beyazit Egitim ve Arastirma Hastanesi**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**