

COMPLICATIONS, AND EARLY OUTCOME OF TRANSURETHRAL RESECTION OF THE PROSTATE: PROSPECTIVE EVALUATION OF 1011 PATIENTS

S.V. Golovko

SUMMARY

In the article presented analysis of treatment of 1011 patients, who underwent transurethral resection of the prostate in the urology clinic of Main military medical clinical center of Ministry of defence of Ukraine from january 2010 to december 2011. Mortality after transurethral resection was 0,2%. Total complications rate in early postoperation period was 11,7%. Most important complication was persisting prostatic obstruction (5,4%), recurrent transurethral revision (5,9%) clinically significant urinary tract infection (3,5%), bleeding requiring blood transfusion (2,5%), and TUR-syndrome (1,2%). Average weight of resected tissue was 32,2 gramms. Incidental prostate cancer was diagnosed in 2,7% of patients. Urinary peak flow rate increased niticeably 21,6±9,4 ml/sec, while post-void residual to 31,1±73,0 ml.

This contemporary information should be of use to potential patients and facilitate subsubption of emerging surgical or nonsurgical benign prostatic hyperplasia treatment options.

1011

2010 0,2%. 2011 .

11,7%. (5,4%), (3,5%), (5,9%), (2,5%), (1,2%).

32,2 9,8% 21,6±9,4 / (10,4±6,8 / , <0,0001), 31,1±73,0 (180,3±296,9 , <0,0001).

35% [4]. 24% [5;6]. () 6 [7]. 1989 Mebust et al. 3 885 [1;2] 54- [8].

15 (1991-2007) 2011 1011

18 (), 1011

(PSA).

[9].

[10]. =0,05.

1011 1.

1.

*	71,1±27,7
80 (%)	14,6
ASA (%)	
1	15,3
2	52,7
3	29,5
4	1,5
' ()	44,5±27,0
Qmax**	10,4±6,8
'	180,3±296,6
IPSS***	20,5±7.6
QoL	4,1±1
(%)	27,7
	28,7

:- ± ;**:- ;***:- 1 35.

1
0,2%.
30

11,7%. 31,1±73,0 (180,3±296,9 , p<0,001).
 (5,9%), (5,4%), (3,5%), 51,1%). 6,1% 100 (-
 (2,5%) - (1,2%). 2
) (52,4±26,4 - -
 60 27,0% - , -
 32,2±18,3 . 60 (9,5% 3,4% 2%
 (2,7%). 27 OR, 5,17 [3,67-7,26] 2,98
 7,1±5,1 . [2,11-4,19],). , -
 , , (OR 0,85 [0,56-1,21]
 21,6±9,4 / (10,4±6,8 / , 1,04 [0,70-1,56] 1,23 [0,80-1,88] 1,31 [0,84-
 p<0,001). 2,04]). 2.

		-			.
30	2,0	1,2	5,2	3,7	6,4
30-60	3,4	1,4	6,2	3,5	5,1
60	9,5	3,0	9,8	4,5	5,3
	2,7	1,4	5,6	3,6	5,8
OR (95% CI)					
60 30	5,17 (3,67-7,26)	2,58 (1,5-4,42)	1,97 (1,46-2,66)	1,23 (0,80- 1,88)	0,85 (0,56-1,21)
60 31-60	2,98 (2,11-4,19)	2,24 (1,27-3,96)	1,65 (1,20-2,56)	1,31 (0,84-2,04)	1,04 (0,70-1,56)

291 (28,7%),
 , -
 , 5 - , -
 (3). , (« » , -
) -
 12% 3,5% (OR 3,78
 [3,20-4,45]). , -
 , 15 . , -
 (2,0%
 5,1%; OR 2,59 [2,06-3,25]), -
 (1,1% 2,1%; OR 1,85 2000 90 000
 [1,56-2,19]), (4,6% [3].
 8,2%; OR 1,85 [1,56-2,19]) (2,7% 6,0%; OR
 2,29 [1,86-2,81]).

			OR (95% CI)
%	2,0	5,1	2,59 (2,06-3,25)
%	2,1	1,1	1,85 (1,33-2,57)
%	8,2	4,6	1,85 (1,56-2,15)
%	6,0	2,7	2,29 (1,86-2,81)
%	12,0	3,5	3,78 (3,20-4,45)

1962 [11], 1974 [12], 1989 [8] Reich O. (9,5% 6,1%) ,
 et al 2007 [19]. Uchida et al [17] , -
 , - 5-7 , 2% [13; 14; 16]. ,
 , 2,5% 1962
 1,3% 1974 , 0,23% 1989 , 0,10% 2007 -
 , 3,9% (, 1989) 2,7% (-
 , - [8].
 (, 6% 1,3%), -
 18%, 17%, 18% 1962, 1974 1989 [17].
 2007 ()
 11,1% 11,0% . Uchida et al [17],
 [13-16]. , 1971 1996
 , 10,2%
 , 60 51%
 60 (5,0). , -
 , -
 , 60 (30
 Uchida et al 1971 1996 3 861 , -2,0%; 60 -3,4%; 60 -9,5%;
 0,1% (, 0,71%
 1985-1996) 60
 0,3% (1971-1985) [17]. 0,09% 30 .
 (20,2% 17,2%) - (32,2) -

[8; 15; 16; 18].

(22,0),
Mebust et al 1989

71,1

1990-
(69,0 1989)

28% 27,5% 1989

12,2% (20,9% 80

27,2), (31,6

et al 1989 Mebust

22% [8].

4,7% 2,5

1. Barry MJ, Fowler FJ Jr, Bin L, Pitts JC 3rd, Harris CJ and Mullan AG Jr. The natural history of patients with benign prostatic hyperplasia as diagnosed by North American urologists. *J Urol* 1997; 157: 10.
2. Girman CJ, Epstein RS, Jacobsen SJ, Guess HA, Panser LA, Oesterling JE et al: Natural history of prostatism: impact of urinary symptoms on quality of life in 2115 randomly selected community men. *Urology* 1994; 44: 825.
3. Wei JT, Calhoun E and Jacobsen SJ: Urologic Diseases in American Project: benign prostatic hyperplasia. *J Urol* 2005; 173: 1256.
4. Oesterling JE: Benign prostatic hyperplasia: a review of its histogenesis and natural history. *Prostate, suppl.*, 1996; 6: 67.
5. Wasson JH, Reds DJ, Brukeswitz RC, Elinson J, Keller AM and Henderson WG: A comparison of transurethral surgery with watchful waiting for moderate symptoms of benign prostatic hyperplasia. The Veterans Affairs Cooperative Study Group on Transurethral Resection of the Prostate. *N Eng J Med* 1995; 332: 75.
6. McConnell JD, Bruskewitz R, Walsh P, Andriole G, Lieber M, Holtgreewe HL et al: The effect of finasteride on the risk of acute urinary retention and the need for surgical treatment among men with benign prostatic

hyperplasia. Finasteride Long-Term Efficacy and Safety Study Group. *N Engl J Med* 1998; 338: 557.

7. Reich O, Gratzke C and Stief CG: Techniques and long-term results of surgical procedures for BPH. *Eur Urol* 2006; 49: 970.

8. Mebust WK, Holtgreewe HL, Cockett AT and Peters PC: Transurethral prostatectomy: immediate and postoperative complications. F cooperative study of 13 participating institutions evaluating 3,885 patients. *J Urol* 1989; 141: 243.

9. Hollander MW and Wolfe A: *Nonparametric Statistical Inference*. New York: John Wiley & Sons 1973.

10. Fisher R: *The logic of inductive inference* *J R Stat Soc Ser A* 1935; 98: 39.

11. Holtgreewe HL and Valk WL. Factors influencing the mortality and morbidity of transurethral prostatectomy: a study of 2,015 cases. *J Urol* 1962; 87: 450.

12. Melchior J, Valk WL, Foret JD and Mebust WK: Transurethral prostatectomy: computerized analysis of 2,223 consecutive cases. *J Urol* 1974; 112: 634.

13. Horninger W, Unterlechner H, Strasser H and Bartsch G: Transurethral prostatectomy: mortality and morbidity. *Prostate* 1996; 28: 195.

14. Gillig PJ, Mackey M, Cresswell M, Kennett K, Kabalin JN and Fraundorfer MR: Holmium laser versus

transurethral resection of the prostate: a randomized prospective trial with 1-year followup. *J Urol* 1999; 162: 1640.

15. Berger AP, Wirtenberger W, Bektic J, Steiner H, Spranger R, Bartsch G et al: Safer transurethral resection of the prostate: coagulating intermittent cutting reduces hemostatic complications. *J Urol* 2004; 171: 289.

16. Kuntz RM, Ahyai S, Lehrich K and Fayad A: Transurethral holmium laser enucleation of the prostate versus transurethral electrocautery resection of the prostate: a randomized prospective trial in 200 patients. *J Urol* 2004; 172: 1012.

17. Uchida T, Ohori M, Soh S, Sato T, Iwamura M, Ao T et al: Factors influencing morbidity in patients undergoing transurethral resection of the prostate. *Urology* 1999; 53: 98.

18. Ho HS, Yip SK, Lim KB, Fook S, Foo KT and Cheng CW: A prospective randomized study comparing monopolar and bipolar transurethral resection of prostate using transurethral resection in saline (TURIS) system. *Eur Urol* 2007; 52: 517.

19. Reich O, Gratzke C, Bachmann A, Seitz M, Schlenker B, Hermanek P, Lack N and Stief C.G.: Morbidity, mortality and early outcome of transurethral resection of the prostate: a prospective multicenter evaluation of 10, 654 patients. *J Urol* 2008; 180: 246-249.