



ORIGINAL RESEARCH PAPER

Urology

ANTIBIOTIC PROPHYLAXIS IN PERCUTANEOUS NEPHROLITHOTOMY

KEY WORDS: PCNL, Urosepsis , Bacteriuria, Bacteremia.

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ABSTRACT

To compare single-dose vs short-course antibiotic prophylaxis protocols in percutaneous nephrolithotomy. Post operative infectious morbidity was compared between the two groups. There were no significant difference between the groups with respect to infectious morbidity.

AIM: To compare single-dose vs short-course antibiotic prophylaxis protocols in percutaneous nephrolithotomy.

3. Aghamir SM, hamidi M, Salavati A, et al. Is antibiotic prophylaxis necessary in patients undergoing lithotripsy.

METHOD: Out of the fifty patients who underwent percutaneous nephrolithotomy with sterile urine pre-op were divided into two groups. The first group (N = 25) received a single dose of antibiotic (100 mg nitrofurantoin) 6 hours prior to anaesthetic induction, and the second group (N = 25) received antibiotic (100 mg of nitrofurantoin per day) one week prior to surgery. The two groups were identical with respect to demography and treatment characteristics. Microbiologic evaluation of extracted stones and urine samples were done. For patients who developed fever in the postoperative period, urine & blood cultures were taken. Factors causing postoperative fever and infection were analyzed. Short-term prophylaxis had no advantage over single-dose prophylaxis in preventing infection.

RESULTS: Postoperative fever was present in 4 patients (grp I) & 3 patients (grp II). Bacteriuria, and bacteremia were present in one patient in each group. Stone cultures were positive in 5 patients (grp I) and 2 patients (grp II). No statistical difference was observed between the two groups in terms of bacteriuria, bacteremia, positive stone cultures, or postoperative fever. The febrile patients had long intra-operative time with usage of more irrigation fluid and longer postoperative hospital stay.

Chart – 1

Group	No. of patients with Fever
I	4
II	3

Chart – 2

Group	No. of patients with bacteriuria
I	1
II	1

Chart – 3

Group	No. of patients with bacteremia
I	1
II	1

Chart – 4

Group	No. of patients with positive stone culture
I	5
II	2

CONCLUSION

In patients whose preoperative urine cultures were sterile, short-term prophylaxis had no advantage over single-dose prophylaxis as a means of preventing infection. The duration of surgery and the amount of irrigation fluid are significant risk factors for postoperative fever.

REFERENCE

1. Bratzler DW, Houck PM, the Surgical Infection Prevention Guideline Writers workshop Antimicrobial prophylaxis for surgery. An advisory statement from the National Surgical Infection Prevention Project. Am J Surg. 2005; 189:395.
2. Wolf JS, Jr, Bennett CJ, Dmochowski RR, Et al, Best practice policy statement on urologic surgery antimicrobial prophylaxis. J Urol 2008; 179:1379.

		Gender		Total
		M	F	
Good control HbA1c < 7	Count	38	12	50
Poor control HbA1c > 7	Count	36	14	50
Total	Count	74	26	100
	% of Total	74.0%	26.0%	100.0%

HBA1C		Cholesterol	Triglyceride	High-density lipoprotein	Low-density lipoprotein
Good control HbA1c < 7	Mean	148.1	114.1	45.5	72.9
	S. D	35.1	60.3	19.1	32.5
Poor control HbA1c > 7	Mean	187.2	156.1	40.1	115.8
	S. D	43.5	60.6	9.0	40.3
Total	Mean	167.6	135.1	42.8	94.4
	S. D	43.9	63.7	15.1	42.3

	Cholesterol	Triglyceride	High-density lipoprotein	Low-density lipoprotein
HBA1C	Pearson Correlation	0.45**	0.33**	-0.17 0.51**
	Sig. (2-tailed)	0.001	.001	.074 0.001
	N	100	100	100 100