

SINGLE DOSE CEPHEXIN PROPHYLAXIS FOR CAESAREAN SECTION

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SUMMARY

A prospective randomized study was conducted on fifty post operative patients. These patients under went an elective LSCS in the Department of Obstetrics and Gynaecology of MAMC and associated LNJP Hospital Delhi. Alternate patient was administered either single dose of Cephixin 1 gm intravenously half an hour before surgery and no antibiotics thereafter or a full course of ampicillin in 500 mg every six hourly for seven days post operatively. The difference in the incidence of morbid events and febrile morbidity in the two groups was statistically in significant ($p>0.05$).

Infectious morbidity is majorpostoperative complication in patients undergoing caesarean section. A fall in overall incidence of febrile morbidity was shown by Rayburn (1983) from 46% to 19% by the use of prophylactic antibiotics. The efficacy of a single dose prophylaxis has been reported by Padilla et al (1983) and Ganesh et al (1986), but it was compared only with a placebo group. The present study is however, aimed at assessing the effectiveness of a single dose of Cephixin given preoperatively in cases undergoing elective LSCS on the postoperative morbidity and it's comparison with patients

receiving full course of antibiotics postoperatively.

MATERIAL AND METHODS

This prospective randomized study was conducted on 50 patients who underwent elective LSCS in the Department of Obstetrics and Gynaecology of MAMC and associated LNJP Hospital, Delhi. Alternate patient was given injection Cephixin in a dose of 1 gm intravenously half an hour before surgery and no antibiotics thereafter (Group A). Remaining 25 patients were given ampicillin, 500 mg every 6 hrs intravenously, intramuscularly or orally for 7 days postoperatively (Group B). A plain catheter was inserted shortly before

the operation and was removed at the completion of surgical procedure. On the third postoperative day haemoglobin level, total and differential counts, urine and high vaginal swab for culture and sensitivity were sent. The following parameters were assessed -

1) Febrile morbidity, defined as a temperature of 38° C two or more occasions 4 hours apart after first 24 hours postoperatively.

ii) Wound sepsis

iii) Endometritis

iv) UTI

v) Number of days spent in the hospital.

The tests applied for calculating the significance of differences between the two groups of data were unpaired 't' test and CHI square test.

OBSERVATIONS

The characteristics of the patients who underwent surgery are as shown in Table I. There was no significant difference between the two groups.

The operative variables in the two treatment groups are as shown in Table II. Only in one patient from Group A, catheter was reinserted in the postoperative period and kept for 24 hours. Both are groups were matched except for the depth of subcutaneous fat.

Table III gives the details of the morbid events in the two groups.

The incidence of wound sepsis in the form of induration and oozing of serious discharge in the cephalexin group was higher

than in ampicillin group but the difference is statistically insignificant. This may be consequent to a statistically significant number of patients with subcutaneous fat of more than 3 cm depth in Cephalexin group. All other morbid events are comparable in both groups. Out of 4 patients of febrile morbidity from Group A, in 2 cases, the cause was UTI and in two no cause was found. However, in group B, one was due to UTI and in other 2 cases no cause was found. In all cases with subinvolved uterus no evidence of endomyometritis was found.

DISCUSSION

The overall incidence of morbid events was 40% in cephalexin group, compared to 28% in ampicillin group, the difference being statistically insignificant ($p > 0.05$). Our postoperative rate of febrile morbidity in group A (16%) is comparable to the cumulative average febrile morbidity in 31 placebo controlled studies of 19% as reported by Padilla et al (1983) and our own results achieved by a routine use of a 7 days course of ampicillin (12%).

It was decided to use cephalexin for single dose prophylaxis because of it being a broad spectrum antibiotic effective against gram positive, anaerobic and aerobic coccal isolates and being one of the least costly cephalosporins.

To conclude, the single dose prophylaxis with cephalexin has been found to be as effective as full course of ampicillin in patients undergoing elective LSCS. It has better drug compliance and is more cost effective.

TABLE I
Characteristics of patients undergoing surgery

	Group A	Group B	P value
1. Age (Years)			
Mean \pm SD	27 \pm 3.3	26 \pm 3.6	>0.05
Range	21-32	19-32	
2. Pre op. maternal weight (kg)			
Mean \pm SD	61.9 \pm 11.2	56.8 \pm 8.7	>0.05
Range	46-92	45-75	
3. Parity			
Mean \pm SD	2.0 \pm 0.9	1.6 \pm 0.8	>0.05
Range	1-3	1-3	
4. No. of pr. LSCS			
0	14	18	
1	8	4	>0.05
2	3	3	
5. Pr. op. Hb(G%)			
Mean \pm SD	106 \pm 1.3	10 \pm 1.1	>0.05
Range	8-13	8-12	
6. Gestational age (weeks)			
Mean \pm SD	38.8 \pm 1.4	38.5 \pm 1.6	>0.05

TABLE II
Operative variables in the two treatment groups

	Group A	Group B	P value
1. Anaesthesia			
G.A.	24	20	>0.05
Regional	1	5	0.05
2. Skin incision			
Vertical	18	22	>0.05
Transverse	7	3	>0.05
3. Depth of S/C fat			
<3 cm	11	19	>0.05
=3 cm	7	4	>0.05
>3cm	7	2	>0.05
4. Mean blood loss approx (ML)	900ml	900ml	
5. Time taken for operation			
< 60 min	12	17	>0.05
=60 min	10	7	>0.05
> 60 min	3	1	>0.05
6. Catheter			
During surgery	25	25	
Postoperatively	1	0	>0.05

TABLE III

Maternal morbidity

	Group A	Group B	P value
Patients with morbid events	10	7	>0.05
Patients with febrile morbidity	4	3	>0.05
Would sepsis			
- Induration alone	2	0	>0.5
- Oozing but no pus	1	0	>0.05
- Pus formation	0	0	
Subinvolved uterus	3	4	>0.05
UTI	2	1	>0.05
Mean No. of days in hospital	8.5 ± 1.0	8.2 ± 0.4	>0.05

REFERENCES

1. Ganesh V., Apuzzio J. Dispenziere B et al. *Am. J. Obstet* 154:1113, 1986.
2. Padilla S.L. Spence M.R. and Beauchamp P.J. *Obstet Gynea* 61:463, 1983.
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TABLE II

	Group A	Group B	
1. Anaesthesia	24	20	
2. Regional	1	2	
3. Spinal	18	22	
4. Epidural	7	8	
5. General	21	18	
6. Nitrous oxide	7	4	
7. Oxygen	7	3	
8. Mean blood gas (pH)			
9. Time from operation			
10. < 60 min	13	17	
11. 60-90 min	10	7	
12. > 90 min	3	1	
13. Caesarean			
14. Dural repair	24	22	
15. Postoperative	1	2	