

INFECTIOUS MORBIDITY IN LOWER SEGMENT CAESARIAN SECTION*

by

DAMYANTI SHARMA

USHA VERMA

and

SANTOSH SAINI

SUMMARY

One hundred cases requiring caesarian section, foetal distress was the commonest indication for section in the emergency cases and repeat sector in the elective glaep. Emergency cases had high in lever of chorioamniotic as shown by cultur of amniotic fluid or a piece of memberanes.

Amniotic fluid infection, a common event during labour, occurs frequently with rupture of membranes or premature deliveries (Naeye, 1977, 1979). Only a portion of amniotic fluid infections are clinically apparent intrapartum (Russell, 1979). This is recognised on the basis of maternal or fetal tachycardia, tenderness and foul swelling Vaginal discharge (Gibb's *et al*, 1980). These signs represent late findings of amniotic fluid infection by pathogens which probably occurs several hours before the appearance of clinical signs of infection (Bobbit, and Ledger 1978). The resultant intrauterine infection of infants are not only epidemiologic nursery problem, but they interest obstetrician with the possibility of early detection of infection and treatment through the mother before birth. More-

over, patient with premature rupture of membrane, is associated with increased morbidity post-operatively (Morrison, 1973). Therefore, amniotic fluid cultures for pathological and bacteriological diagnosis are necessary for proper management.

The present paper deals with the infectious morbidity after lower segment caesarean section in emergency and booked cases. Cervical swab and amniotic fluid cultures were done to show possible mode of infection.

Material and Methods

One hundred cases requiring caesarean section were studied in the department of Obstetrics and Gynaecology, Medical College and Hospital, Rohtak. A detailed history including history of labour, complete general physical abdominal and pelvic examination were done. Relevant investigations (Hb., TLC, DLC, Complete Urine) were done, including culture wherever needed.

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From: Department of Obstetrics and Gynaecology and Microbiology, Medical College, Rohtak-124 001 (Haryana).

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Pre-operative: Maternal and fetal tachycardia, foul vaginal discharge and pyuria was noted. Cervical and amniotic fluid cultures were done. Amniotic fluid was taken at the time of L.S.C.S. prior to opening the amniotic cavity in patients with intact membrane. When no fluid was obtained as in ruptured membrane, a piece of membrane was sent for culture and sensitivity.

Post-operative records of temperature, pulse, and BP was kept. Urine Culture and swab was done in every case. On second postoperative day, wound swab for C/S was taken on 4th postoperative day. Each patient was classified according to following criteria:

1. U.T.I. fever|urinary symptoms|urine culture positive.
2. Endometritis: Fever|unhealthy tochia.
3. Wound infection: Cellulitis|exudate.
4. Other complications: Pneumonitis, thrombophlebitis etc.

Observation

Among study group, fetal distress was the commonest indication in patients who were operated as emergency cases and repeat section formed the main indication in elective group.

51 percent were primigravida: Majority of the emergency cases were anaemic: 57 percent had Hb. level less than 10 gm% and 11 percent were severely anaemic.

Table I shows the preoperative diagnostic criteria for choric-amnionitis. This clearly depicts that patients who had leaking or ruptured membranes for more than 24 hours had high incidence of infection.

The organisms obtained in different cultures pre and post-operatively is shown in Table II.

Post-operative morbidity is shown in Table III. Majority of the electively operated cases 98.5 percent (21/26) were discharged within few days of their operation in good condition. Only 19.7 percent of patients operated as an emergency went home after 10 days. Majority of emergency cases remained in the hospital for more than 20 days for one or other complication. This is in agreement with the Gibb's *et al*, 1980; Morrison *et al*, 1973.

Perinatal mortality is shown in Table IV. It is eight times higher than the elective group.

TABLE I
Preoperative Diagnostic Criteria of Chorioamnionitis (Emergency)

Duration of leaking membranes	Maternal pyrexia	Maternal Tachycardia	Fetal Tachycardia	Foul Discharge	Urine M/E pus cells
0-12 hrs (30 patients)	0	3	4	1	1
13-24 hours (16 patients)	1	2	3	1	2
>24 hours (28 patients)	3 5.3% (4/74)	10 20.2% (15/74)	11 24.3% (18/74)	7 12.2% (9/74)	5 10.8% (8/74)

TABLE II
Organism Obtained in Different Cultures

	Pre-operative Emergency cases (74)		Elective cases (20)		Post-operative	
	Cervical	Amniotic fluid	Cervical	Amniotic fluid	Urine	Wound
E. coli	20	15	1	1	9	3
Pseudomonas	2	8	—	—	—	—
Streptococcus haemolyticus	1	1	—	—	—	—
Klebsiella	4	1	—	—	—	—
Minor polymorphs	—	1	—	—	3	—
E. coli and Streptococcus	1	—	—	—	—	—
Staphylococcus	2	1	—	1	1	9
Proteus	3	1	—	—	6	—
E. coli and Pseudomonas	—	—	—	—	3	—
Aeruginosa	—	—	—	—	2	1
Pneumonia	—	—	—	—	—	—
Total	30	33	1	2	23	13

TABLE III
Post-operative Morbidity

ROM	Pyrexia	Urine	Wound dehis- ence	Foul vag. discharge	Wound infection	TLC raised leuco- cytosis
Emergency cases	5(23.8%)	3(14.2%)	6	Nil	1	1
12-24 hours		Nil	3	1	1	1
Emergency cases	7					
>24 hours		10 (1 had preop. UTI)	13	8	10	9
Emergency cases	15					
Elective cases	6	3	3	1	Nil	1

TABLE IV
Perinatal Mortality

Causes of death	Emergency cases 74	Elective cases 26
Still birth (I.U.D.)	2	Nil
Asphyxia neonatorum	2	1
Prematurity	2	Nil
Infection (septicaemia)		Nil
Klebsiella infection)	2	
Total :	8	1

Discussion

One hundred patients with caesarean sections were studied to see the morbidity in patients with leaking membranes or labour and no labour group. The total morbidity in labour group was 148 percent (112/74) which is significantly higher than in non-labour group which had 36 percent (8/26) morbidity, this is same as in Gibb's series (1972). The patients who had trial or labour in the hospital under antibiotic cover (Injection Ampicillin 500 mg 6 hourly) behaved postoperatively in the same way as elective group.

The emergency patients having longer duration of leaking had high incidence of chorioamnionitis (Table I) and increased post-operative morbidity.

There was positive cervical culture in 31 emergency cases (41.3 percent) and organisms were found in 28 (40.2 percent) cases of amniotic fluid. Out of these cultures, 55 percent had the same organism in cervical and amniotic fluid. 16.8 percent of these cultures had different organisms. In 18.2 percent cervical cultures were positive while amniotic fluid was sterile.

10 percent of the amniotic fluid (3 cases) was positive for organisms, while the cervical culture was negative in these cases. The amniotic fluid in these cases had 'pseudomonas' in 2 cases and E. coli in 1. This might have been inoculated from patient's skin or it may be endogenous.

The E. coli was the commonest organism in all the cultures of our series as also reported by Rusell, 1979. This is possible that infection has travelled from genital tract to amniotic cavity. Moreover

most of these patients came as an emergency after having multiple vaginal examination outside and were handled by untrained dais. They had poor preoperative preparation. Majority of the patients belonged to poor socio-economic condition with a Hb. level less than 10 mg%. These patients had a longer hospital stay than elective group. Majority (80.3 percent) were discharged within 10 days.

It is felt that not only cervical culture but amniotic fluid cultures should be done routinely specially in emergency cases to identify the specific organisms involved and to give proper chemotherapy after sensitivity tests thus reducing morbidity and hospital stay.

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