A CRITICAL EVALUATION OF CASEAREAN SECTION IN ECLAMPSIA

by

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Although eclampsia is largely a preventable disease, its incidence in India is still high because total antenatal care in this country is a far cry (Dawn, 1978). The maternal and foetal loss also remain very high. The treatment as yet, largely remains a conservative one with sedatives, tranquillisers and anticonvulsants followed by artificial rupture of membranes. Largactil-phenergan-pethidine cocktail has played its long innings and Diazepam-pethidine combination is the talk of the day. However, anticonvulsant regimen has failed to improve maternal and foetal salvage in this country. The scope of caesarean section in eclampsia deserves critical evaluation to put it in the proper perspective.

This study comprises of 23 Caesarean Sections in Eclampsia, in Eden Hospital, Calcutta during the period of January, 1977 to August, 1979.

Material and Method

Out of 163 eclamptics treated during the period, this study was done on 47 cases in two groups viz.

Group A. Study Group—Eclamptics delivered by L.U.C.S.—23 cases.

Group B. Control Group—Eclamptics delivered vaginally—24 cases.

Both the groups had almost equal distribution as regards age and parity. Both the groups were put under diazepam-pethidine as well as Largactil-phenergan-pethidine regime along with intravenous dextrose. Routine clinical and laboratory monitoring were done. Table I shows the indications of section. In group A, 3 cases had additional obstetric indication viz. breech presentation, post C.S. pregnancy and diabetes. Twenty-two cases had operation under general araesthesia administered by senior anaesthetists and the diabetic patient had epidural anaesthesia. Section was done irrespective of the duration of pregnancy and the foetal heart sound was present in all the cases except one. The control group went into labour either spontaneously or induced. The nursing and medical care remained a constant factor in both the groups.

Results

Table II shows that convulsion onset to delivery interval was longer in Group B. By section, delivery was achieved within 12 hours of first fit in 69.32% of Group A.

Control of convulsions: Table III shows that group B had more than 10 fits in 20.83% in contrast to 8.69% of Group A. Only 3 cases (13.00%) had 1-2 fits following section, but 10 cases (41.66%) had 2-10 fits following vaginal delivery.

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TABLE I
Indications for Section

Closed os	Uncontrolled fits	Slowed labour after A.R.M.	Very early in labour	Additional obstetric indication
7 *(30.43%)	3 (13%)	10 (43.47%)	3 (13%)	*3 (13%)

* overlapping

TABLE II
Convulsion Onset—Delivery Interval

Groups	No. of cases	3-6 hrs.	7-12 hrs.	13-18 hrs.	19-24 hrs.	24-48 hrs.	Over 48 hrs.
A	23	3 (13%)	13 (56.32%)	4 (17.39%)	—	1 (4.34%)	2 (8.70%)
B	24	1 (4.17%)	5 (20.83%)	13 (54.16%)	—	5 (20.83%)	—

TABLE III
Number of Convulsions Before Delivery

No. of fits	1-4	5-7	8-10	Over 10	Total
No. of Gr.A	5 (21.74%)	7 (30.43%)	9 (39.12%)	2 (8.69%)	23 cases
No. of Gr.B	8 (33.33%)	9 (37.50%)	2 (8.33%)	5 (20.83%)	24 cases

Post-operative Period in Group A

There was hypotension and tachycardia in 4 cases following section requiring steroids and 1-2 pints of blood. Urinary output was satisfactory except in 2 cases. Twenty cases regained consciousness within 24 hours, 1 after 48 hours and 1 after 96 hours. One case died in coma. Albumin in urine disappeared within 24 hours in 18 cases and after 48 hours in 4. Wound gaping and psychosis were found in 1 each. Pulmonary oedema in 16 cases disappeared within 12-48 hours.

Maternal outcome

Table V shows significant improvement in maternal mortality in Group A

TABLE IV
Correlation of Maternal Mortality And Convulsion-Delivery Interval

Convulsion onset-delivery interval	Group A L.U.C.S.		Group B Vaginal delivery	
	No. of cases	Death	No. of cases	Death
3 - 6 hours	3	—	1	—
7-12 „	13	—	5	—
13 -18 „	4	—	13	2 (15.38%)
19 -24 „	—	—	—	—
25 -48 „	1	—	5	2 (40%)
Over 48 „	2	1 (50%)	—	—
Total	23	1 (4.34%)	24	4 (16.66%)

over Group B. Mortality was higher when convulsion-delivery interval exceeded 12 hours. One case of Group A died 22 hours after section from renal failure. She came to the hospital 48 hours after the first fit. She had 27 fits outside and 20 fits in the hospital before section. A.R.M. could be done 14 hours after admission. Because of noh-progress of labour section was done 18 hours after A.R.M. Section could not be considered earlier because of hyperpyrexia.

Among 163 cases of eclampsia, 22 mothers died an incidence of 13.5%.

Foetal outcome: The foetal loss in Group A was 6 (26.87%) as against 10 (41.66%) in Group B.

Mortality in both the groups was more in premature babies. The overall foetal loss was 62 (38%) among 163 cases.

Discussion

In the present study, section was done after initial sedation in 30.43% with closed os and in 13% very early in labour (Table II). 69.32% of the cases were delivered within 12 hours of convulsion onset by L.U.C.S. (Table III). The rationality of such approach deserve critical discussion.

With improvement of anaesthesia and better understanding of fluid and electrolyte balance, the risk involved in section, no doubt, is much less to-day. General anaesthesia, moreover, cuts down all sensory stimuli, controls fits quickly and offers better foeto-maternal oxygenation under positive pressure (Ghosh, 1974). Foetal salvage, should also be better for this reason. Recurrence of fits was found in 13% in the study group as against 41.66% in vaginal delivery.

The value of early termination of pregnancy is undisputed to-day (Menon, 1961; Greenhill, 1965; Eastman and Hellman, 1966) and it is widely accepted that shorter the convulsion onset-delivery interval, better the maternal prognosis. Our observation is that it is lowest when this interval is less than 12 hours (Table IV) in vaginal delivery too. Menon (1961) and Dutta and Biswas (1978) among many others have found it true. It is well-known that the blood biochemistry alters after 12 hours and prognosis becomes progressively worse with time.

Menon (1958) in a large series followed conservative therapy for 8-10 hours, ruptured the membranes in uncontrolled cases if os effaced and did section under local anaesthesia if os closed. Thereby he brought down maternal mortality to 2.4% from 17.5% upto 1955. Opinion as regards timing of A.R.M. or section varies. Lean *et al* (1968) did section 1 hour after initial sedation and achieved very good result.

We are persuing a policy of "more section in eclamptics" and in 1979 our rate is 26.83% compared to 5.7% of Konar and Das (1975). While we have done it in 87% primarily for eclampsia, they did it only for obstetric reasons. Lean *et al* (1968) did section in 63% and achieved a maternal and perinatal mortality of 3.3% and 11.1%. Maternal loss in our series was 4.34% against 16.66% in vaginal delivery (Table IV). Maternal mortality among 12 cases of Konar and Das (1975) was 12.5%. Foetal loss in the present study was 26.87% in section and 41.66% in vaginal delivery. Overall, maternal and foetal loss during 1973-76 in this centre was 17% and 47% and that of Dutta and Biswas (1978) 21.9% and 37.23% respectively.

Summary

1. Caesarean section was done in 23 cases (Group A) among 163 eclamptics

treated in Eden Hospital, Calcutta, from 1977 to 1979 and the result obtained was compared with identical 24 control cases (Group B) delivered vaginally. Eclampsia per se was the indication in 87% and only 13% had additional obstetric indication.

2. Section rate was deliberately increased from 6% in 1977 to 26.83% in 1979. It was done in 30.43% with closed os and early in labour in 13% although A.R.M. was possible in the latter. Convulsion-onset-delivery interval was less than 12 hours in 69.32% in Group A as against 25% of Group B.

3. Recurrence of fits was only 13% following L.U.C.S. but 41.66% in vaginal delivery.

4. Maternal mortality was 4.34% in Group A as against 16.66% in Group B. The perinatal loss in the former was 26.87% and in the latter 41.66%. The overall maternal and perinatal mortality among 163 cases were 13.5% and 38% respectively.

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