ECLAMPSIA IN RURAL AREA

by

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While efficient antenatal care has almost eliminated eclampsia in developed countries, the incidence is still high in India. The disease as yet remains one of the most common causes of maternal mortality. The occurrence of eclampsia is very high in rural areas because antenatal care is available to or availed by only a minor fraction of the population. Further, the quality of antenatal care in rural areas is not upto the mark.

A prospective study was carried out in Sub-Divisional Hospital, Diamond Harbour, and in one year (18th Aug. 1980 to 17th Aug. 1981) 81 cases of eclampsia were treated among 1751 deliveries, an incidence of 4.62% (i.e. 1 in 22). The reported incidence in cities in recent years varies from 0.27% (Deshmukh and Anjaneyulu, 1980) to 1.15% (Dutta, 1981). The cities too cater to a good number of cases from rural areas (Gun *et al*, 1982).

Eclampsia occurs more in winter season and 41 (50.61%) of our cases were treated in 4 months (November, 1980 to February, 1981). Only 2 cases (2.46%) were booked and 59 (73.58%) were referred from surrounding health centres.

Type: Majority 49 (60.49%) were antepartum in type, 13 of intrapartum and 19 cases of postpartum occurred in this hospital. The initial B.P. was above 180/130 m.m. of Hg in 20 cases. Pulmonary oedema was present in 17 and there were 2 cases of status eclampticus.

Age and Pariy

The incidence of those between 16-20 years, was very high, fifty-two (62.2%) as against 38.4% of Konar (1976). Sixty-six 85.18% were primiparas. It is well known that eclampsia is chiefly a disease of primiparas (Table I and II).

Duration of pregnancy

The period of pregnancy was upto 28 weeks in 2 (2.46%), between 29-32 weeks in 15 (18.51%), 33-37 weeks in 39 (48.14%) and 38-40 weeks in 25 (30.86%).

TABLE I
Age Distribution

Number of cases	16-20 Yrs.	21-25 Yrs.	26-30 Yrs.
81	52 (62.2%)	21 (26%)	8 (9.8%)

Management

Besides antibiotics, frusemide, 10% dextrose drip and O_2 inhalation, the anti-

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TABLE II
Parity Pattern

Number of cases	Primigravida	P_1+0	P_2+0	P_3+0	P_4+0
81	69 (85.18%)	6 (7.4%)	2 (2.46%)	2	2

convulsant and sedative regimen followed is shown in Table III. After initial sedation, A.R.M. was done and it was our policy to rupture the membranes where feasible, whether in labour or not. The management was entirely based on clinical findings and without any laboratory monitoring. There was no intake-output chart, continuous bladder drainage was not possible in majority (for non-availability of Foley's catheter and, railed cot) and nasopharyngeal suction was possible on rare occasions (when available from O.T.). Syntocinon 2.5 units was used in I.V. drip in 16 cases of delayed labour.

TABLE III
Anticonvulsants and Sedatives Used

Drug combination	No. of cases
Pethidine I.V. drip, Largactil and Phenergan I.M.	5
Largactil and Phenergan I.V. drip, Pethidine I.M.	5
Largactil and Phenergan I.V. drip, Diazepam I.M.	8
Largactil, Phenergan, Pethidine I.M.	28
Pethidine I.M., Diazepam I.V. and I.M.	8
Largactil, Phenergan I.M., Diazepam I.V. and I.M.	27

Table IV shows the convulsion—delivery interval. Of 58 cases delivered, 1 died 16 hours after onset of seizure. Four cases died undelivered, 1 after 13 hours, 2 after 30 and 1 after 40 hours. Two of them were midtrimester eclamptics.

Mode of Delivery

Nine (15.51%) cases had low forceps, 2 (3.44%) had L.U.C.S. under local anaesthesia and the remaining had normal delivery with episiotomy.

Maternal Mortality

The maternal mortality was directly proportional to the number of fits. The

TABLE IV
Convulsion Onset-Delivery Interval

Type	No.	Within 12 rrs.	13-24 hrs.	25-36 hrs.	37-48 hrs.	Over 48 hrs.
Antepartum and Intrapartum	58	18 (31.03%	22 (37.93%)	13 (22.41%)	5 (5.17%)	2 (3.44%)

TABLE V
Correlation of Fits and Maternal Mortality

Fits	Antepartum		Intrapartum		Post-partum		Total	Mat. Death
	No.	Death	No.	Death	No.	Death	No.	
1-5	9	1	5	—	II	—	25	1 (4%)
6-10	26	1	7	—	4	1	37	2 (5.4%)
11-20	14	3	—	—	2	1	16	4 (25%)
Over 20	—	—	1	—	2	1	3	1 (33.33%)
Total	49	5 (10.2%)	13	—	19	3 (15.78%)	81	8 (9.87%)

TABLE VI
Maternal and Perinatal Mortality

Authors	No. of cases	Maternal Mortality	Perinatal Loss
Konar (1976)	229	46 (20%)	37.5%
Dutta and Biswas (1978)	188	33 (17.5%)	37.23%
Dawn and Sinha (1979)	141	20 (14.2%)	30%
Jadav and Nayak (1980)	54	4 (7.4%)	34%
Dutta (1981)	76	8 (10.5%)	36.8%
Goswami and Dawn (1981)	165	22 (13.5%)	38%
Present Series (1982)	81	8 (9.87%)	45%

mortality was more (15.78%) in post-partum group. The overall mortality in the present series was 9.87%. Without autopsy it is difficult to ascertain the exact cause of death. Death was due to respiratory failure from pulmonary oedema in 3, heart failure in 2, status eclampticus—1, hyperpyrexia—1 and renal failure—1. Table VII shows the maternal mortality and perinatal loss in some studies. Among 66 babies born in this hospital, 30 babies were lost (SB-21, N.N.D.-9) the perinatal loss being 45%. Twenty-four babies weighed between 1000-2000 gms., 35 between 2100-2500 gms, and only 7 above 2500 gms.

Complications

The commonst complication was urinary tract infection-8 followed by bed sore-5, postpartum shock-3, hyperpyrexia-3, psychosis-3, thrombophlebitis-3, prolonged coma-2, oliguria-2, hematuria-1 and V.V.F.-1.

Discussion

The primary object of present study was to find out the incidence of eclampsia in rural areas and to observe maternal mortality with meagre resources. An incidence of 4.62%, only 30 miles away from Calcutta is pretty high. The incidence in Eden Hospital was 0.63% (Konar, 1978) but in Burdwan District Hospital it was 2.63% (Gun *et al* 1982).

It is universally accepted that shorter the convulsion—delivery interval better the prognosis. With this in mind the membranes were ruptured at the earliest opportunity and syntocinon was used in

16 cases of delayed labour. Yet the convulsion delivery interval was 13-24 hours in 37.93% and over 24 hours in 31.03%. Although we did not find correlation between convulsion delivery interval but mortality increased with more number of fits. Unfortunately, 4 cases died undelivered 13-40 hours of convulsion onset.

We have used diazepam along with largactil and phenergan in a good numbers of cases. Our impression is that diazepam alone is not suitable for cases with intial high B.P. It was also observed that diazepam alone (with pethidine) was better after delivery to avoid post partum hypotension, shock and psychosis. Dutta (1981) obtained good result by supplimenting 'Lytic Cocktail' with diazepam.

With limited resources for management, the mortality in our series was 9.87%, better than many of those in cities (Table VI). But it should be emphasised that the martality depends on many factors and none should be complacent as Menon (1961) achieved a rate of 2.2%. Further, with diazepam therapy a rate of 3.3% has been obtained (Lean *et al* 1968).

The perinatal mortality was very high but the incidence of prematurity was very high and we have no neonatal or premature care unit.

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References

1. Dawn, C. S. and Sinha, B.: Int. J. Gynecol. Obstet. 17: 281, 1979.
2. Deshmukh, K. K. and Anjaneyulu, R.: J. Obstet. Gynaec. India. 30: 96, 1980.
3. Dutta, G. P.: J. Obstet. Gynec. India. 31: 408, 1981.
Gynaec. India. 31: 408, 1981.
4. Dutta, G. P. and Biswas, S.: J. Obstet. Gynaec. Inlia. 28: 588, 1978.
5. Goswami, B. K. and Dawn, C. S.: J. Obstet. Gynaec. India. 31: 599, 1981.
6. Gun, K. M., Banerjee, B., Nandy, A. K. and Mondal, G. S.: J. Obstet. Gynaec. India. 32: 199, 1982
7. Jadav, S. and Nayak, P. N.: J. Obstet. Gynaec. India. 30: 902, 1980.
8. Konar, M.: Aggregate Statistics and Annual Report of Eden Hospital, Calcutta, p. 29, 1976.
9. Konar, M.: Aggregate Statistics and Annual Report of Eden Hospital, Calcutta, p. 3, 1978.
10. Lean, T. H., Ratnam, S. S. and Siva Samboo, R.: .J Obstet. Gynaec. Brit. C'Wlth. 75: 865, 1968.
11. Menon, M. K. K.: J. Obstet. Gynaec. Brit. C'Wlth. 68: 417, 1961.