Pattern of Eclampsia in Onitsha, Nigeria

By

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SUMMARY

Objective: To ascertain the incidence, pattern and outcome of eclampsia in mothers attending and using the obstetric services of the St. Charles Borromeo Hospital, Onitsha.

Methods: A retrospective study of 102 patients that had eclampsia between January 1991 and December 2000, a ten-year period was done.

Information extracted from the case-notes included maternal age, parity, booking status, maternal morbidity and mortality. Statistical analysis was with the Chi-square distribution.

Results: The study revealed a hospital incidence of eclampsia was 0.65% of all deliveries. The incidence for the unbooked (1.31%) patients was higher than for the booked (0.54%) patients (X^2=16.67, P<001). Postpartum eclampsia was the commonest form (46%), followed by antepartum eclampsia (38%), while the least was intrapartum eclampsia, (14.7%). These differences were statistically significant [X^2 = 17.12, P<.001]. The maternal mortality rate was 69/1000 (41/1000 for booked and 138/1000 for the unbooked patients).

Conclusion: Eclampsia is still a major health problem facing obstetric practice in this area. Good antepartum care and intensive surveillance of patients after delivery will reduce eclampsia and its complications.

Key Words: *Eclampsia, Postpartum surveillance*

INTRODUCTION:

The fact that some pregnant women had epilepti-form fits was known to Hippocrates who lived in the fourth century B.C[1]. This condition was called eclampsia. Eclampsia constitutes a major obstetric emergency and is associated with maternal morbidity and mortality. It is a leading course of obstetric death in developing countries, together with obstructed labour, ruptured uterus, sepsis and obstetric haemorrhage[2,3,4,5]. Pre-eclampsia and eclampsia have been suggested to have genetic causal factors[6,7]. The incidence of eclampsia varies in races and continents.[8,9,10].

Treatment modalities to control eclamptic fit differ[11,12,13,14,15]. Inadequate provision of prenatal care has been blamed for the occurrence of eclamptic fits[16,17,18,19].

This study was conducted to ascertain the hospital incidence of eclampsia, the pattern of the disease and its outcome in Onitsha.

MATERIALS AND METHODS

This study was done at St. Charles Borromeo Hospital, Onitsha. The hospital often serves as a referral centre for other hospitals and clinics in the town and Anambra state. Patients admitted for delivery between January 1991 and December 2000, who had eclampsia, form the subjects of this study.

In a retrospective study case-folders of patients were retrieved from the medical records department, labour ward, lying-in-ward and operating theatre. Information extracted from the records included maternal age, parity, booking status, maternal morbidity and mortality.

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The diagnosis of eclampsia was made in the presence of elevated blood pressure of $^{140}/_{90}$mmHg and above; and or a rise in diastolic pressure of 20mmHg above the booking clinic reading with proteinuria (Albustic strip test at least ++ plus), or peripheral oedema and fits occurring after the 20th week of pregnancy, during labour or up to the 10th day post-delivery. Epilepsy, hypoglycaemia, meningitis, cerebral malaria, encephalitis and other lesions that cause fits were excluded.

Statistical analysis was with the Chi-square test.

RESULTS

Of a total of 15,648 deliveries during the period of study, 102 had eclampsia or 0.65% table 1. The incidence for unbooked patients was higher (1.31%) than for the booked patients (0.54%). This difference is statistically significant ($x^2 = 16.6$, $p< 0.001$)

Table 2 gives the parity of the eclamptic patients. Seventy four patients (73%) were primaparous while 28 (27%) were multiparous ($x^2 =20.74$, $p<0.001$). This increased risk of eclampsia among unbooked patients is noted in all types of eclampsia, be it antepartum, intrapartum or post partum ($x^2 = 17.12$, $p< 0.001$).

Table 3 shows that 62 (60.8%) of the patients were 20 years or below. Among the 102 eclamptic patients, 7 deaths occurred, giving a maternal mortality rate of 69/100 (table 4). The risk of death was more in the unbooked patients than in the booked patients with a relative risk ratio of 30.2. Five of the deaths were due to cerebral haemorrhage, while the other two were due to renal failure.

Table 1: Hospital Incidence of Eclampsia

Booking Status	Total Deliveries	No of Eclampsia	Incidence %
Booked	13,440	73	0.54
Unbooked	2,208	29	1:31
Total	15,648	102	0.65

Table 2: Parity of Patients with Eclampsia

Parity	Antepartum Eclampsia		Intrapartum Eclampsia		Postpartum Eclampsia		Total (%)
	Booked	Unbooked	Booked	Unbooked	Booked	Unbooked	
Primipara	21 (20.6%)	5 (4.9%)	6(5.9%)	3 (2.9%)	29 (28.4%)	10 (9.8%)	74 (73.5%)
Multipara	10 (9.8%)	3 (2.9%)	3 (2.9%)	3 (2.9%)	4 (3.9%)	5 (4.9%)	28 (27%)
Total	31 (30%)	8 (7.8%)	9(8.8%)	6 (5.8%)	33 (32.4%)	15 (14.7%)	102

Table 3: Age of Patients with Eclampsia

Maternal Age	Antepartum Eclampsia		Intrapartum Eclampsia		Postpartum Eclampsia		Total
	Booked	Unbooked	Booked	Unbooked	Booked	Unbooked	
≤ 20	18	5	6	4	20	9	62
21 – 30	8	2	3	1	8	3	25
≥ 31	5	1	-	1	5	3	15
Total	31	8	9	6	33	15	102

Table 4: Maternal Death among Patients with Eclampsia

Booking Status	No. With Eclampsia	No. Of Deaths	Risk of Death
Booked	73	3	0.04
Unbooked	29	4	0.14
Total	**102**	**7**	**0.07**

DISCUSSION

The incidence of eclampsia of 0.65% falls within the estimated range for developing countries[20]. This incidence is low when compared to some reports from different regions of the country[16, 21] and other developing countries[19]. It is however, higher than figures reported from developed countries[22, 23]. The reasons for this disparity in incidence between different regions are not apparent. It could be as a result of genetic factors as pointed out by Chesley or other environmental factors. Genetic factors have been implicated in the aetiology of pregnancy induced hypertension, the environmental factors are yet to be fully investigated[6,7].

A high incidence of postpartum eclampsia is recorded in this study. 47% of the patients had postpartum eclampsia. This finding has been reported by most works done in the developed countries[1, 22]. This finding is at variance with reports from some parts of the country and the world, where antepartum eclampsia has been identified as the commonest form of eclampsia[14,23,24,25,26];

This high prevalence of postpartum eclampsia may be attributable to inadequate care, which these patients received, since unbooked cased constituted 14% of our total hospital deliveries. Relaxation of vigilance after delivery has been identified by Chamberlain[1] as a possible aetiological factor in some of these patients. An area of agreement is that intrapartum eclampsia occur less frequently.[21,22,23,24]. This is more likely because these patients are already admitted into the ward and under close monitoring, thus imminent eclampsia can be arrested before the progression to eclampsia.

Primigravid patients have been identified as being more prone to eclampsia than multipara, this fact has been confirmed in this study, and it is in agreement with other reports [1,10,22,23 -26]. Maternal age of less than 20years has also be confirmed as a predisposing factor in the aetiology of eclampsia and this study and other reports have confirmed this[1,10,18,19].

The maternal mortality rate figures related to eclampsia in this study are comparable with reports from other studies [24, 27], but lower than that reported from India and South Africa [24]. As in most other studies unbooked patients have been identified as the major risk factor in the maternal mortality rate[23,24].

CONCLUSION

Eclampsia is still a major health hazard and it is responsible for a significant proportion of maternal morbidity and mortality in this area. Unbooked patients are at a high risk of both eclampsia and its complications including death. Better antenatal care and close monitoring during and immediately after delivery would help detect the patients at risk, such that early intervention may reduce the risk of eclampsia.

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