

Yes, Eclampsia is Preventable - A Study at GRH, Madurai

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Abstract

Background: The purpose of this study was to determine whether eclampsia is potentially preventable with focus on booked and unbooked cases.

Materials and Methods: All the cases of eclampsia referred from nearby, civil hospitals, rural areas, and private hospitals in the period of 2016.

Results: A total of 534 cases were studied at GRH Madurai (GHT cases including eclampsia) of which 39 cases are of eclampsia. The incidence was 7.4%. 97.4% of cases had irregular antenatal visits and were unbooked under GRH, Madurai. Mean age group was 21 years. 65% of the cases were primigravida. Antepartum (AP) eclampsia was the most common seen with 64% incidence. In 25 cases of AP eclampsia, 80.7% had a cesarean section while 14.3% had a vaginal delivery; 5% had operative vaginal delivery.

Conclusion: We concluded this serious complication of pregnancy is due to the lack of antenatal care in rural areas and urban slums to prevent it, personnel at civil hospitals should be trained to of administering magnesium sulfate, an anticonvulsant as after giving a loading dose none of the patients threw a fit. Cases booked and immunized at GRH, Madurai with regular follow-up did not develop eclampsia.

Key words: Eclampsia, Magnesium sulfate, Teritary hospital

INTRODUCTION

By the end of 20th century, in developed countries eclampsia incidence is reduced, in developing countries like India it still remains an important cause of maternal and perinatal morbidity and mortality. It is estimated that 50,000 maternal deaths occur worldwide every year due to eclampsia most of which occur in developing countries. Incidence of eclampsia is still high due to improper antenatal care though it is a preventable complication.

MATERIALS AND METHODS

Madurai Medical College is a tertiary hospital. For higher treatment cases are referred from nearby rural areas, Community Health Centres (CHCs), Primary Health Centres, civil hospitals and private nursing homes are sent here. A total number of cases studied 534 in period 2016 of which eclampsia cases were 39.

All the cases were started on Pritchard's regime, magnesium sulfate 4 an intravenous (I/V) bolus dose and 5 g in I/M in each buttock followed by 5 an I/M in alternate buttock 4 hourly and tablet labetalol for control of blood pressure with supportive care in form of I/V line, oxygen inhalation and mouth gag, suction, continuous catheterization, etc.

After stabilization of the patient, obstetrical management was carried out.

Access this article online



www.ijss-sn.com

Month of Submission : 02-2017

Month of Peer Review : 03-2017

Month of Acceptance : 03-2017

Month of Publishing : 04-2017

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RESULTS

- The incidence of eclampsia came out to be 7.4%. All cases were unbooked and referred from nearby CHCs, civil hospitals, and private nursing homes.
- Maximum number of cases was between age groups of 21 and 25 years (62%) 26% were below 20 years of age and 12% above 25 years.
- Highest number of females was primigravida (65%); antepartum (AP) eclampsia was the most common (64%), followed by postpartum (PP) eclampsia (31%) and intrapartum eclampsia (5%).
- The majority of the cases had irregular antenatal check-up. A large number of cases belonged to rural background.
- About 80.7% had a caesarean section while 14.3% had a vaginal delivery; 5% had operative vaginal delivery (Tables 1-4).

In our study, maximum number of patients presented in the third trimester of pregnancy (94%) except 6% who had gestation of <34 weeks. None of the patients threw a fit after initiation of magnesium sulfate therapy. Maternal complications occurred in the form of disseminated intravascular coagulation, PP pyrexia, oliguria, and PP hemorrhage. The complication rate came out to be 23%. Maternal mortality in present study came out to be nil. There were 56% alive births, 30% preterm births of which 12% early neonatal deaths.

DISCUSSION

- The incidence was 7.4% which is high as compared to other studies. The incidence seems high as compared

Table 1: Booked/unbooked/referred cases

Booked	1
Unbooked	38
Referred (from nearby CHCs, CH, private nursing homes)	31

CHC: Community Health Centres

Table 2: Eclampsia type

Type	Number of cases (%)
Primigravida	25 (65)
Multigravida	14 (35)

Table 3: Type of eclampsia

Types	Number of cases (%)
AP	25 (65)
IP	2 (5)
PP	12 (31)

PP: Postpartum, IP: Intrapartum, AP: Antepartum

to reported incidence in Indian referral hospitals.

- About 79% of the cases were referred from nearby civil hospitals, CHCs and private nursing homes in the present study.
- Most of the cases in our study were from the rural area, unbooked with irregular antenatal check-up. Similar findings were reported by Samal *et al.*, Khantun *et al.*, and Chandra and Bhardwaj.¹⁻⁵
- Most of the cases were primigravida. Sheraz *et al.* (69.1%), Datta *et al.* (66.0%) and Shaheen *et al.* (69%) also reported maximum occurrence of eclampsia in prime.
- The prevalence of AP eclampsia came out to be highest which is comparable to the studies of Sarna (69.23%), Sheraz *et al.* (67.3%) and Shaheen *et al.* (62%).⁶⁻⁹
- Maximum number of cases were between 21 and 25 years of age which is comparable to Sarma (71.79%) and Sheraz *et al.* (78.2%).
- Most of our subjects presented with fits at term pregnancy (72%). Similar findings were reported by Chaudhary.
- None of the patients threw another fit after receiving loading dose of magnesium sulfate. Same findings were seen by Samal *et al.*⁴
- Maternal mortality is nil in the present study, comparable to that of Sheraz *et al.* (3.6%),⁶ Gaddi and Somegowda (5.4%) 11 but less as reported by Nobis (11.54%).
- 12 maternal mortality was high but comparable to that reported by Nobis (42.96%). 12 others have reported less maternal morbidity.
- Perinatal mortality in this study came out to be 30%, reported by Gaddi and Somegowda (39.3%) and Khantun *et al.* (38%) (Table 5).^{10,11}

Table 4: Maternal complications

Complications	Number of cases (%)
DIC	2 (5)
Postpartum pyrexia	2 (5)
PPH	3 (8)
Oliguria	2 (5)
Total	9 (23)

PPH: Postpartum hemorrhage, DIC: Disseminated intravascular coagulation

Table 5: Summary

Parameter	N (%)
Total number of patients	534
Non severe preeclampsia	334 (62.5)
Severe preeclampsia	74 (13.85)
Chronic hypertension	35 (6.5)
Imminent eclampsia	37 (6.92)
AP eclampsia	25 (4.68)
IP eclampsia	2 (0.3)
PP eclampsia	12 (2.2)
HELLP syndrome	15 (2.8)

PP: Postpartum, IP: Intrapartum, AP: Antepartum

CONCLUSION

We concluded that because of improper antenatal care incidence of eclampsia is still high in rural areas and urban slums. Hence, this area is to be focused to prevent this serious complication of pregnancy. Eclampsia can be prevented if the pregnant women can get proper health education and regular antenatal care.

Early antenatal booking, regular follow-up, knowledge of associated risk factors and to detect this condition early are essential to prevent it.

Proper management of pregnancy induced hypertension and in time referral to higher center is important step, as it is associated with high maternal morbidity and mortality and poor perinatal outcome. Personnel at community centers, civil hospital, and private doctors should be referred after giving primary treatment, i.e. magnesium sulfate, an anticonvulsant as delay in treatment leads to complications.

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How to cite this article: Chitra KS, Sudha M, Trupti N. Yes, Eclampsia is Preventable - A Study at GRH, Madurai. *Int J Sci Stud* 2017;5(1):141-143.

Source of Support: Nil, **Conflict of Interest:** None declared.