



ISSN NO. 2320-5407

Journal Homepage: [-www.journalijar.com](http://www.journalijar.com)

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI: 10.21474/IJAR01/12494
DOI URL: <http://dx.doi.org/10.21474/IJAR01/12494>



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ADVANCED RESEARCH (IJAR)
ISSN 2320-5407
Journal Homepage: <http://www.journalijar.com>
Journal DOI: 10.21474/IJAR01

RESEARCH ARTICLE

AN OBSERVATIONAL STUDY OF ATYPICAL ECLAMPSIA AND ITS MANAGEMENT IN TERTIARY CARE CENTER OF CENTRAL INDIA

Dr. Aarti Jeenwal¹, Dr. Anupama Dave², Dr. Ranjana Patil³, Dr. Pooja Gangwar⁴ and Dr. Krati Mehta⁵

1. Assistant Professor, Obstetric and Gynecology, Mahatma Gandhi Medical College and MY Hospital, Indore, Madhya Pradesh, India.
2. Professor, Obstetric and Gynecology, Mahatma Gandhi Medical College and MY Hospital, Indore, Madhya Pradesh, India.
3. Associate Professor, Obstetric and Gynecology, Mahatma Gandhi Medical College and MY Hospital, Indore, Madhya Pradesh, India.
4. Assistant Professor, Obstetric and Gynecology, Shyam Shah Medical College and SGMH, Rewa, Madhya Pradesh, India.
5. Senior Resident, Obstetric and Gynecology, Mahatma Gandhi Medical College and MY Hospital, Indore, Madhya Pradesh, India.

Manuscript Info

Manuscript History

Received: 15 December 2020

Final Accepted: 18 January 2021

Published: February 2021

Key words:-

Eclampsia, Atypical Eclampsia,
Gestational Hypertension, Convulsions

Abstract

Background: Eclampsia is development of convulsions and/or unexplained coma at more than 20 weeks gestation and /or less than 48 hours after delivery. In case if eclampsia occurs before 20 weeks or after 48 hours postpartum or in absence of typical signs of hypertension and/or proteinuria, it is called atypical eclampsia. Diagnosis and management of these cases is a challenge for obstetricians.

Method: An observational Prospective study conducted in the Department of Obstetrics and Gynecology, M.G.M. Medical College and M.Y.H. Hospital Indore, from Jan 2019 - Dec 2019. Data was collected regarding the relationship of the patient's first seizure to delivery interval, prodromal symptoms, use of magnesium sulfate, antihypertensive therapy and follow up medical care.

Results: Total 284 eclampsia patient were admitted in the year, of which 59 (20.7%) of these patient showed atypical feature. Moratality in eclampsia patient in the year was 34 out of the total 96 maternal death i.e. 35.41% in year. Out of these 34 eclamptic deaths, death due to atypical eclampsia was 09 i.e. 26.47%. Main cause of mortality in both eclampsia and atypical form was Pulmonary edema.

Conclusion: We recommend that health care providers in obstetric practice should have a high index of suspicion for the potential atypical clinical manifestations of eclampsia, irrespective of gestational age at the time of onset or the number of days after delivery, prodromal symptoms, gestational hypertension or pre eclampsia or proteinuria. Obstetricians should be aware of atypical presentations, maintain a high level of suspicion, and be ready to take immediate steps.

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Corresponding Author:- Dr. Pooja Gangwar

Address:- Assistant Professor, Obstetric and Gynecology, Shyam Shah Medical College and SGMH, Rewa, Madhya Pradesh, India.

Introduction:-

Traditionally eclampsia is development of convulsions and/or unexplained coma at more than 20 weeks gestation and /or less than 48 hours after delivery.^[1] In recent years, the new term “atypical preeclampsia-eclampsia” has been used to describe non-classical forms of hypertensive disorders arising during pregnancy.^[2-4] Although there is no strict definition of atypical preeclampsia-eclampsia, it has come to include cases with minimal or no proteinuria, but with hypertension, or proteinuria with no or marginally elevated blood pressure (BP), or without hypertension or proteinuria. Presentations before 20 weeks or more than 48 h postpartum, those resistant to MgSO₄ therapy, and hemolytic anemia, elevated liver enzymes, and low platelets (HELLP) syndrome and its variants are also included in the atypical category.^[5] Diagnosis and management of these cases is a challenge for obstetricians.

Material and Method:

A Prospective hospital - based study conducted at Department of Obstetrics and Gynecology, M.G.M. MEDICAL COLLEGE AND M.Y.H. HOSPITAL INDORE, from Jan 2019 - Dec 2019. Data was collected regarding the relationship of the patient's first seizure to delivery prodromal symptoms, use of magnesium sulfate antihypertensive therapy and follow up medical care.

Inclusion criteria:

1. Presentations < 20 weeks or > 48 h postpartum.
2. Those patient who are resistant to MgSO₄ therapy.
3. Cases with minimal or no proteinuria but with hypertension.
4. Normotensive patient with proteinuria.
5. Eclamptic patient without hypertension and proteinuria.

Exclusion criteria:

All differential diagnosis of eclampsia were excluded by relevant investigation. Cerebrovascular accidents, Hypertensive encephalopathy, hemorrhage, Seizure disorder, Ruptured aneurysm, Undiagnosed brain tumor, Arterial embolism or thrombosis, Metabolic disease, Cerebrovenous thrombosis, Thrombotic thrombocytopenic purpura, DIC, Post dural puncture syndrome.

Observation And Results:-

Table 1:- Age Distribution.

Age in year	Number	Percentage
<20	19	32%
21-25	26	44%
>25	14	24%

Most common age group involved 21-25yr (44%) age group.

Table 2 :- Distribution according to the mode of delivery

LSCS	22	37%
Vaginal delivery	35	59%
Undelivered	02	4%

Table shows mode of delivery age group 21-25yr age group was 59%.

Table 3:- Distribution of cases according to Gravidity and Parity.

	Number	Percentage
Primigravida	33	57%
Multigravida	26	43%

Primigravida more commonly affected 57%

Table 4:- Distribution according to symptoms.

Presentation	Number	Percentage
Hypertensive But No Proteinuria	19	32.20%
Without Hypertension / Proteinuria	18	30.50%
Proteinuria But Normotensive	08	13.55%

< 20 Weeks And > 48 Hour Of Delivery	07	11.86%
Resistant To Mgso4	07	11.86%

Most common presenting symptom hypertensive but no proteinuria was 32.2%

Table 5:- Distribution according to complication/ near miss cases.

Adverse Outcome	Number [23]	Percentage
Pulmonary Edema	07 (11.86%)	11.86%
Thrombocytopenia	03 (5.08%)	5.08%
HELLP	03 (5.08%)	5.08%
Shock	03 (5.08%)	5.08%
AKI + HELLP	01 (1.6%)	1.6%
Anaemia	02 (3.38)	3.38%
DIC	01 (1.6%)	1.6%
Pulmonary Edema + Anaemia	01 (1.6%)	1.6%
MODS	02(3.38%)	3.38%

Pulmonary edema was most common complication 11.86%

Table 6:- Mortality in Atypical cases

	Number	Percentage
Antenatal	07	11.8%
Postnatal	02	03.4%
Total	09	15.2%

Mortality in Atypical cases was more in antenatal women 11.8%

Table 7:- fetal outcome

	Number	Percentage
Alive and healthy	36	63.10%
Went to nursery	08	14.03%
Still birth/IUD	13	22.80%
Total	57	100

Still birth/IUD was 22.8%

Total 284 eclampsia patients were admitted in the year 2019 out of which 59 (20.7%) patients had atypical eclampsia features. Total mortality in the eclampsia patients were 34 out of which 09 (26.47%) were due to atypical eclampsia. main cause of mortality was pulmonary edema. 33(57%) patients were primigravida and 26(43%) were multigravida. 37% of patients delivered of LSCS and 59% were delivered vaginally, 4% were not delivered.

Discussion:-

The classic teaching that eclampsia is the end point of a disease process, starting sub clinically and proceeding to mild preeclampsia and then severe preeclampsia implies that hypertension and proteinuria should precede the onset of eclampsia. In contrast to this paradigm, eclampsia can potentially be encountered at the beginning of the disease process before hypertension and proteinuria develop. In classic cases, the disease usually first involves the arteries and kidneys, manifesting as hypertension and proteinuria before other organ systems are involved. In atypical cases, however, the organ involvement may start with other systems, such as cerebral involvement, which presents initially as eclampsia. Convulsion in a setting of preeclampsia after 20 weeks of gestation till 48 hours postpartum is known as Eclampsia and is a well-known entity. Diagnosis in these cases is obvious. Occurrence of Eclampsia before 20 weeks or after 48 hours postpartum or in absence of typical signs of hypertension and/or proteinuria, is known as atypical eclampsia. Late post-partum eclampsia (occurring after 48 hours postpartum but within 4 weeks after the delivery) is a rare variant and late post-partum eclampsia occurring without preceding preeclampsia is even rarer and invariably poses diagnostic dilemma.^[6] As per Adie et al. out of 162 cases of Eclampsia encountered during a period of 2 years, 8% had features of atypical eclampsia with normal blood pressure.^[7] Katz et al. reported 53 cases of eclampsia wherein there was no preceding preeclampsia and seizure was the only manifestation of the disease.^[8] Out of 54 cases of eclampsia (over 15 years) Lubarsky et al. noted that 44% cases had no feature of prior preeclampsia.^[9] Presently there is no standard guideline for early detection and prevention of late onset post-partum

eclampsia in a patient without prior preeclampsia. It has been found that these patients can have symptoms of brain oedema (headache, visual symptoms) even when they are normotensive.^[10]

Conclusion:-

Late postpartum eclampsia without any prior evidence of preeclampsia is an established rare entity. It has been found that many of these patients develop neurological symptoms, malaise, nausea and vomiting prior to development of eclampsia. Aim of presenting this case is to highlight this rare entity and also to emphasize the importance of neurological symptoms which may be the only presentation prior to a seizure. One must be careful not to misdiagnose this as seizure disorder unrelated to pregnancy though it occurs late.^[11]

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