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Original Research Article

Survey on common practice in management of preeclampsia by obstetricians

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ABSTRACT

Background: Approximately 72,000 pregnant women all over the world die every year due to direct or indirect complications related to eclampsia and severe preeclampsia. Incidence of hypertensive disorders in pregnancy in India is found to be 10.08% as per the data collected by the National Eclampsia Registry (NER). Here we present the results of a survey conducted among obstetricians in India to know the common practices in the management of pre-eclampsia followed in our country.

Methods: Observational study of survey which was conducted for the period of 1 month from 22nd May 2020 to 22nd June 2020. Questionnaire was prepared on surveyheart.com and sent to obstetricians via Social media platforms to the members of FOGSI. All answers 'collected' and results were prepared from given answers. The survey was answered online by 289 obstetricians.

Results: For mild to moderate pre-eclampsia Labetalol is still first line antihypertensive agent being used by many of the obstetricians. In our study also we found out Tab Labetalol 100mg BD is the most preferred type (278, 96.19%) of first line anti-hypertensive in cases of pre-eclampsia followed by Cap Nifedipine 5mg QID and Tab Amlodipine 5mg OD respectively.

Conclusions: Comprehensive educational efforts and skill building modules are need of hour to keep every practicing obstetrician regarding recent advances in standard practice protocols. With close monitoring of all cases and well selected anti-hypertensive treatment, it is possible to achieve favourable outcomes for the mother and the baby.

Keywords: Aspirin, Fundoscopy, IUGR, Labetalol, Pre-eclampsia

INTRODUCTION

Pre-eclampsia can be defined as multisystemic disorder characterized by the development of hypertension after 20 weeks of gestation, with proteinuria or in its absence with signs or symptoms suggestive of target organ injury most often the liver and kidneys.¹⁻³ Eclampsia is the result of brain injuries caused by pre-eclampsia.^{1,2} Both preeclampsia and eclampsia are dangerous complications

of pregnancy which responsible for morbidity and mortality.³ Early antenatal care and prompt clinical risk assessment, biomarkers detection, close vigilance, calcium and nutritional supplementation are helpful in avoiding to develop preeclampsia.³

Approximately 72,000 pregnant women all over the world die every year due to direct or indirect complications related to eclampsia and severe preeclampsia.³ Preeclampsia and eclampsia ranks second

only to haemorrhagic shock as a specific and direct cause of maternal mortality.³ Incidence of hypertensive disorders in pregnancy in India is found to be 10.08 % as per the data collected by the National Eclampsia Registry (NER).³ Prompt antenatal care and patient education has been identified as the single most easy and most effective intervention which could influence the status of maternal mortality of our country.³ Here we present the results of a survey conducted among obstetricians in India to know the common practices in the management of pre-eclampsia followed in our country.

METHODS

Observational study of survey conducted over the period of one month from 22nd May 2020 to 22nd June 2020. This survey was launched on 22nd May 2020 on the occasion of World Pre-Eclampsia day by Medical Disorders in Pregnancy Committee of Federation of Obstetric and Gynaecological Societies of India (FOGSI). Data collection was done on common practice in management of preeclampsia by obstetricians. The survey was answered online by 289 obstetricians.

Statistical analysis

All the parameters were studied and analysed on the basis of percentages. As this was a purely observational study, all parameters were analysed using descriptive statistics i.e. percentages and proportions were calculated and no statistical test was applied.

Validation of questionnaire

Questionnaire was prepared in English on surveyheart.com and its content validity was assessed by two co-investigators and then sent to obstetricians via WhatsApp, Gmail & Social media to the members of FOGSI. All answers were collected and results were prepared from given answers.

RESULTS

Total 289 numbers of obstetricians attempted the questionnaire and the results were as follows.

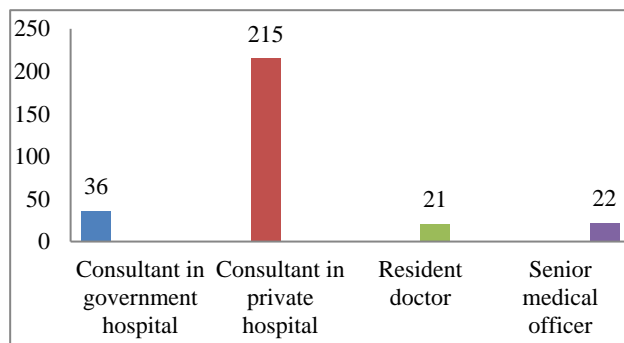


Figure 1: Obstetrician practising in Govt. or private hospital.

Figure 1 shows out of total 289 entries, 215 obstetricians were from private hospital (73.13%) followed by 36 obstetricians were working in government run hospitals (12.24%). Total number of resident doctors and senior medical officer who participated in survey was 21 and 22 respectively.

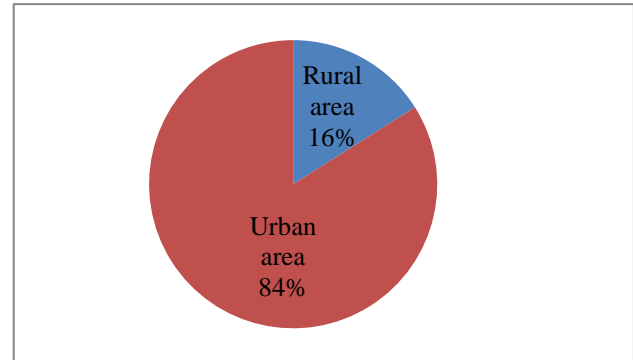


Figure 2: Urban/rural hospital.

Figure 2 shows maximum participation i.e. 246 (83.96%) obstetricians were from urban area, and 47 (16.04%) were participated from rural area.

For incidental mild pre-eclampsia maximum obstetricians i.e., 223 (77.16%) out of 289 preferred to start anti-hypertensive on OPD basis with home BP monitoring, only 66 (22.84%) out of 289 preferred to admit for further evaluation of pre-eclampsia (Figure 3).

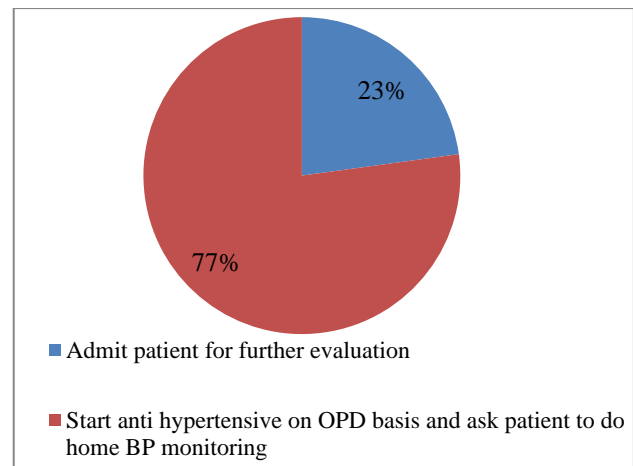


Figure 3: During routine ANC follow up, if you find incidental mild pre-eclampsia patient, what do you advice further?

Total 151 (52.25%) obstetricians preferred to advice first trimester screening by uterine artery Doppler for all ANC OPD follow up patients, whereas rest 138 (47.75%) prefer not to do uterine artery Doppler in first trimester of pregnancy (Figure 4).

Labetalol 100mg BD is the most preferred type (278, 96.19%) of first line anti-hypertensive in cases of pre-

eclampsia followed by Cap Depin 5mg QID and Tab Amlodipine 5mg OD respectively (Figure 5).

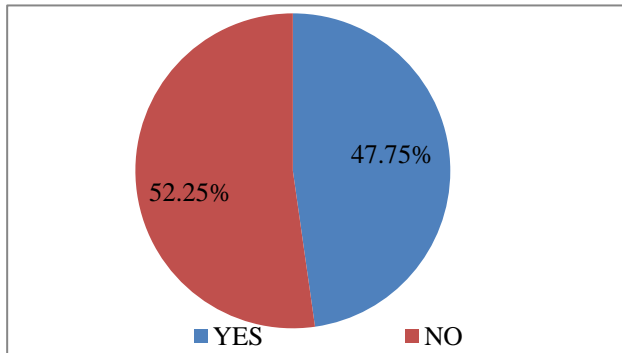


Figure 4: Do you advice first trimester screening by uterine artery doppler for all ANC patients following in OPD ?

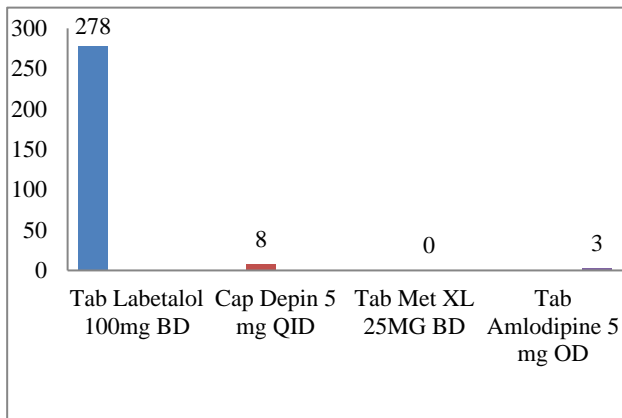


Figure 5: What is the first line anti-hypertensive, you prescribe to patients of pre-eclampsia?

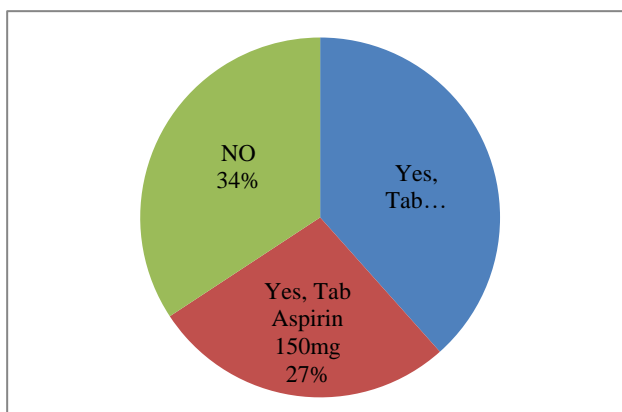


Figure 6: Do you prescribe Tab aspirin routinely for prevention of pre-eclampsia ?

Total 111 (38.41%) of obstetricians prefer to use Tab Aspirin 75 mg prevention of pre-eclampsia as a prophylaxis, 79 (27.34%) were in favour of using Tab Aspirin 150 mg instead and rest 99 (34.26%) were not in favour of using Tab aspirin as a prophylaxis (Figure 6).

Total 187 (64.71%) obstetricians prefer to use Inj Betamethasone and 66 (22.84%) were in favour of Inj Dexamethasone and rest 36 (12.46%) don't routinely use steroid prophylaxis (Figure 7).

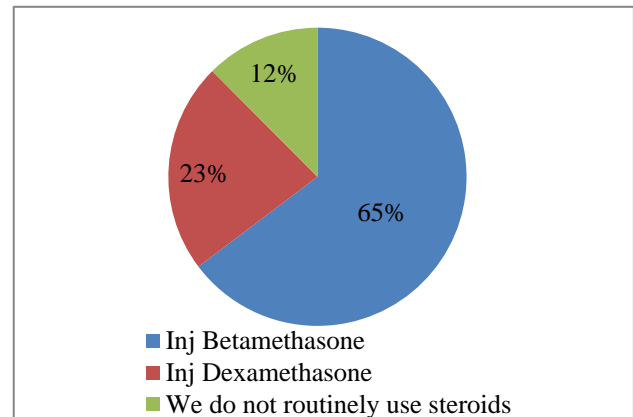


Figure 7: What steroid prophylaxis do you prefer?

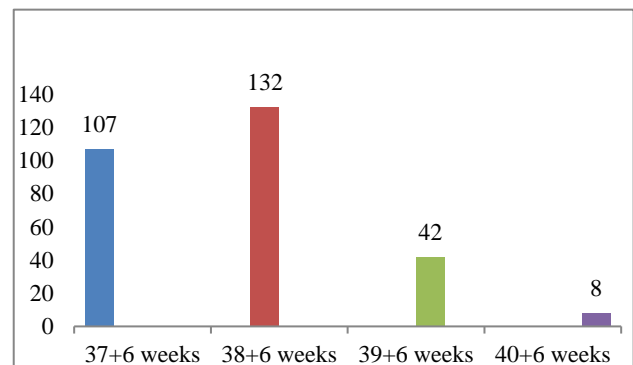


Figure 8: At what preferred gestational age do you induce patients for labour in cases of controlled BP ?

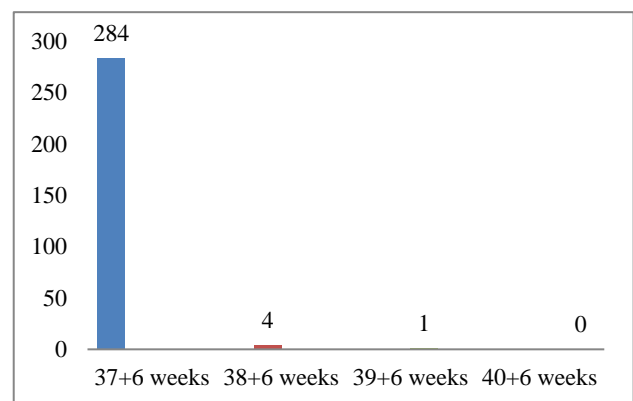


Figure 9: At what preferred gestational age do you induce patients for labour in cases of uncontrolled BP?

Maximum obstetricians i.e., 132 (45.67%) preferred to induce labour in cases of controlled BP at 38+6 weeks of gestation followed by 37+6 weeks by 107 (37.02%) and 39+6 weeks by 42 (14.53%) and 40+6 weeks by 8 (2.77%) (Figure 8).

Maximum obstetricians i.e., 284 (98.27%) preferred to induce labour in cases of uncontrolled BP at 37+6 weeks of gestation followed by 38+6 weeks by 4 (1.38%) and 39+6 weeks by only 1 (0.35%) and 40+6 weeks by none (0%) (Figure 9).

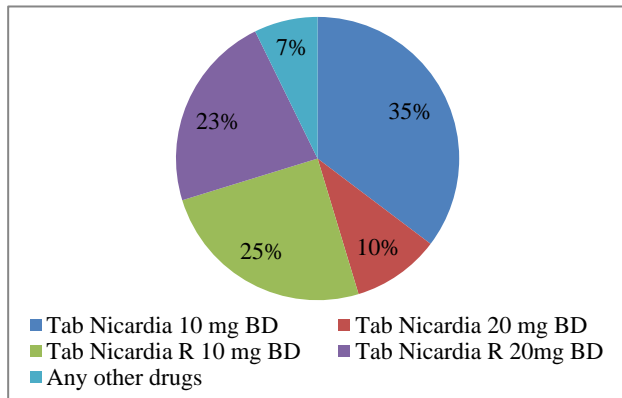


Figure 10: What antihypertensive do you add in cases of uncontrolled BP after first line antihypertensive given at full dosage ?

In cases of uncontrolled BP after first line antihypertensive given at full dosage maximum (102, 35.29%) prefer to use Tab Nicardia 10mg BD followed by Tab Nicardia 20 mg BD (29, 10.03%), Tab Nicardia R 10mg (72, 24.91%), Tab Nicardia R 20mg (65, 22.49%) and rest preferred any other drugs (21, 7.27%) (Figure 10).

Most common indication of termination of pregnancy found out by this survey was Impending Eclampsia by total 210 Obstetricians (72.66%), followed by Uncontrolled BP after 2 drugs by 79 Obstetricians (27.34%).

Most common preferred contraception in post-partum period of pre-eclampsia is IUCDs opted by total 137 (47.40%), followed by Barrier method of contraception by 108 (37.37%) obstetricians, followed by combined OCPs, Inj DMPA, Permanent sterilization, 4 (1.38%), 38 (13.15%), 2 (0.69%) respectively.

Maximum obstetricians (167, 57.79%) prefer to do funduscopy in cases of pre-eclampsia, were rest (122, 42.21%) were against the funduscopy for all cases of pre-eclampsia.

Proportion of induction of labour to LSCS was, 40-60% by 81 (28.03%) followed by 20-80% by 65 (22.49%), 50-50% by 59 (20.42%), 60-40% by 55 (19.03%), 80-20% by 29 (10.03%).

DISCUSSION

Mild pre-eclampsia is characterised by of BP 140/90 mmHg to 149/99 mmHg,⁴ and it is advisable to admit such a patients of mild pre-eclampsia for further

evaluation.⁴ In our study for incidental mild pre-eclampsia maximum obstetricians i.e. 223 (77.16%) out of 289 preferred to start anti-hypertensive on OPD basis with strict home BP monitoring and only 66 (22.84%) out of 289 preferred to admit for further evaluation of pre-eclampsia. There is a strong relationship between first-trimester uterine artery doppler indices and the subsequent development of preterm pre-eclampsia.⁵ Whereas in our study Total 151 (52.25%) obstetricians preferred to advice first trimester screening by uterine artery doppler for all ANC OPD follow up patients, whereas rest 138 (47.75%) prefer not to do uterine artery doppler in first trimester of pregnancy.

For mild to moderate pre-eclampsia Labetalol is still first line antihypertensive agent being used by many of the obstetricians.^{4,2} In our study also we found out Tab Labetalol 100mg BD is the most preferred type (278, 96.19%) of first line anti-hypertensive in cases of pre-eclampsia followed by Cap Nifedipine 5mg QID and Tab Amlodipine 5mg OD respectively. For the prevention of preeclampsia and its complications the only available effective therapy that is currently known is use of low-dose aspirin.¹² Most of the gynaecologist prefer Tab Aspirin 75-150 mg daily from 12 weeks of gestation until the birth of the baby, in a pregnant women who are at high risk of developing preeclampsia.^{1-4,6,7} Low-dose aspirin is associated with a 10-19% reduction in preeclampsia risk and a 10-16% decrease in perinatal morbidity and mortality.³ In our study 111 (38.41%) of obstetricians prefer to use Tab Aspirin 75 mg for prevention of pre-eclampsia as a prophylaxis, 79 (27.34%) were in favour of using Tab Aspirin 150 mg instead and rest 99 (34.26%) were not in favour of using Tab Aspirin as a prophylaxis for pre-eclampsia.

Women with severe preeclampsia may present with headache, visual disturbances also including blindness may or may not be associated with other symptoms of impending eclampsia, to anticipate this funduscopy is important to asses severity of pre-eclampsia.²⁻⁴ Similarly we also found out many of the obstetricians are well familiar with the importance of funduscopy and maximum obstetricians (167, 57.79%) prefer to do funduscopy in cases of pre-eclampsia, were rest (122, 42.21%) were against the funduscopy for all cases of pre-eclampsia.

The use of corticosteroids has shown great importance in the successful outcome of pregnancy, as it helps the correct development of fetal lungs and reduced risk of respiratory distress syndrome in newborns and it also plays important role in neuroprotection for preterm foetuses.^{1,2,7} Corticosteroid therapy is therefore recommended to a pregnant woman between 28 and 36 weeks of gestation, for whom continuation of pregnancy is not possible because of poorly controlled preeclampsia and in such cases delivery is probable or planned in the next seven days (maximum).^{1,2,7} This study shows that maximum participated obstetricians were in favour of

routine use of steroid therapy for fetal lungs maturation but only difference we found out is choice of drugs they prefer, total 187 (64.71%) obstetricians prefer to use Inj Betamethasone and 66 (22.84%) were in favour of Inj Dexamethasone and rest 36 (12.46%) don't routinely use steroid prophylaxis. In women with severe preeclampsia, a viable fetus and pregnancy in between 34 and 36 weeks of gestation, a policy of an expectant management may be followed, if maternal hypertension is well controlled, no signs of maternal organ dysfunction or no signs of fetal distress and vitals can be monitored well.^{2,7,8} In this study maximum obstetricians i.e., 132 (45.67%) preferred to induce labour in cases of controlled BP at 38+6 weeks of gestation followed by 37+6 weeks by 107 (37.02%) and 39+6 weeks by 42 (14.53%) and 40+6 weeks by 8 (2.77%), and in case of severe uncontrolled pre-eclampsia maximum obstetricians i.e., 284 (98.27%) preferred to induce labour at 37+6 weeks of gestation followed by 38+6 weeks by 4 (1.38%) and 39+6 weeks by only 1 (0.35%) and 40+6 weeks by none (0%).

In post-partum period every patient of preeclampsia should be monitored closely for next 6 weeks with proper advice regarding the use of regular antihypertensive medications and shall follow up for regular check-up.³ Such mothers should be guided and encouraged to use contraception at least for a period of 2–3 years.³ The preferred method of contraception would be an IUCD. Post-partum mother should be counselled and educated regarding the importance of pre conceptional check-up, counselling and the necessary care peri-conceptionally to reduce risk of pre-eclampsia and its complications in the subsequent pregnancy.³ In this study most common preferred contraception in post-partum period of pre-eclampsia is IUCDs opted by total 137 (47.40%), followed by Barrier method of contraception by 108 (37.37%) obstetricians, followed by combined OCPs, Inj DMPA, permanent sterilization, 4 (1.38%), 38 (13.15%), 2 (0.69%) respectively.

Limitations of the study include, as this was a survey of personal choices. So, it is expected that the results do not truly reflect the standard guidelines or protocols in the management of preeclampsia. Rather, it gives an idea about the preferences of various obstetricians based on their personal experiences and knowledge.

CONCLUSION

This Survey shows that majority of obstetricians followed the standard practices as per the recommendations and guidelines. This highlights efforts to inform practicing obstetricians about the best practices for preeclampsia

prevention and management has been largely successful, though there are still discrepancies.

Comprehensive educational efforts and skill building modules are need of hour to keep every practicing obstetrician regarding recent advances in standard practice protocols.

Early detection and prompt treatment of pre-eclampsia can help to reduce the burden of this disease. Monitoring on OPD basis is a feasible option in selected patients who are likely to follow-up. In severe cases, it is always advisable to admit the patient. The patient and her family members are to be counselled regarding the condition and its potential life-threatening complications. With close monitoring of all cases and well selected anti-hypertensive treatment, it is possible to achieve favourable outcomes for the mother and the baby.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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