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Original Research Article

Association of adverse pregnancy outcome and domestic/intimate partner violence

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ABSTRACT

Background: Domestic/intimate partner violence is not a mere household issue. It is a global phenomenon that occurs in all the countries and cuts across all strata, races and countries. Apart from being an issue of human/individual rights, it also has major health consequences. The main aim of this study is to stress the need of screening and detecting violence in antenatal women.

Methods: This was a questionnaire based observational cross sectional study done at King Edward Memorial Hospital, Mumbai, India over a span of one year. A total of 200 antenatal/postnatal patients seeking healthcare were enrolled after an informed consent with approval from the Institutional Ethics Committee. Percentages of various parameters were analysed. Test of significance was Chi square test and Odd's ratio ($p < 0.05$).

Results: Prevalence of domestic/intimate partner violence in our study was 12.5% and 7% in the group with normal pregnancy outcome and 18% in group with adverse pregnancy outcome. It was found that violence was more prevalent in age group of 21 to 30 years, love marriages, nuclear families, lower educational level of partner, addiction in partner, unplanned pregnancies, lower economic conditions and families supporting dowry and gender bias and allowing freedom of choice and contraception.

Conclusions: Need for routine screening for violence in women of reproductive age group with vulnerable subset of pregnant women. Creating awareness/sensitivity amongst healthcare professionals and to train them to identify and help these women.

Keywords: Adverse pregnancy outcome, Domestic/intimate partner violence

INTRODUCTION

Domestic or intimate partner violence is not only a major but also a preventable public health problem. It refers to violence perpetrated against adolescents and adults within the context of family or intimate relationships. Though men/women, girls/boys, transgenders; anyone can become a victim of domestic violence, in majority of the cases it is the woman who is a sufferer. Domestic violence is characterized by behavioural pattern associated with physical and sexual attack and

exploitation, as well as psychological and economic coercion and oppression.

The 1993 United Nations declaration on elimination of violence against women defined such violence as: "Any act of gender based violence that results or is likely to result in physical, sexual or psychological harm or suffering to woman including threats of such acts, coercion, arbitrary deprivation of liberty, whether in public or private life such violence includes domestic violence, intimate partner violence, sexual

abuse(including marital rape), psychological abuse, emotional abuse, restricting financial freedom, dowry related violence, and any type of abuse of female children in the household.” (United Nations Declaration on the Elimination of Violence against Women1993).¹

Domestic violence is a burning issue that cuts across all racial, ethnic, religious, educational and socio-economic lines. At the same time, the ominous silence of communities including medical fraternity about it does a disservice to women.

The WHO multi-country study of Women Health and Domestic Violence showed that the life time prevalence of physical or sexual partner violence or both varies between 15-17%.²

According to National Family Health Survey-3 (2005-2006) in India, partner violence occurs with 37.2% of ever-married women from their husbands and 16% never married women have faced violence from their family members. Domestic violence occurs with 30.4% of urban married women of age group 15-49yrs and 40.2% of rural married and 46.4% of uneducated women. (National Family Health Survey -3 2005-2006).³

Nearly two out of five married women experience some form of violence in their marital relationship. But women seeking help is only one in four and only 2% of them seek help from police. This is due to gender roles entrenched in the women by families and the society.

Most common form of domestic violence is physical followed by emotional and sexual violence. Slapping is the most common form of physical violence but some of the violent acts can be life threatening.

Worldwide it is estimated that violence against women is a serious cause of death and incapacity among reproductive age women as is cancer and is more common cause of ill health than accidents and malaria combined.⁴

The demographic and health survey in India showed that the prevalence of HIV was more than four times higher in women who face physical and sexual violence as compared to the non-abused women.⁵

Estimates of prevalence of domestic violence in pregnancy are in the range of 1-20% with most studies identifying rate between 4-8%. These estimates suggest that magnitude of violence against women is bigger and occurrence commoner than medical problems in pregnancy namely preeclampsia, gestational diabetes and antepartum haemorrhage, for which women are routinely screened and evaluated.⁶

Domestic violence may result in adverse conditions like birth control sabotage, unwanted pregnancy, miscarriage, recurrent pregnancy loss, preterm birth, low birth weight,

preterm premature rupture of membranes, direct maternal and foetal injury, still birth, placental abruption, labour dystocia, inadequate antenatal and medical care and nutritional problems.

The present study is an attempt to analyse the existing trends in our tertiary institute in prevalence of domestic/intimate partner violence in our pregnant patients and their pregnancy outcomes. As providers of reproductive and sexual health services, obstetrics and gynaecology department has an important role in screening, detecting, referring to other specialities if required and in overall management of these victims.

METHODS

This was an observational study based on a questionnaire. Study was conducted over a period of one year at a tertiary care hospital and referral centre attached to a teaching institute in Mumbai (India). A total of 200 antenatal/postnatal patients seeking healthcare at this hospital were enrolled after approval from the Institutional Ethics Committee. Patients were recruited in for the study on the basis of set inclusion/exclusion criteria and most importantly after the consent of the patient. However, inclusion/exclusion of the patient in the study did not affect her care and management at the hospital. 100 patients with normal pregnancy outcome and 100 with adverse outcome were interviewed in detail. After collecting the data, comparative analysis between both the groups was done.

Inclusion criteria

100 women with normal pregnancy outcome (normal vaginal delivery or lower segment caesarean section with birth weight >2.5kg) with or without medical/surgical illness were interviewed in the control group and willing to participate in the study.

100 women with adverse pregnancy outcomes (Threatened and inevitable preterm labour, recurrent or sporadic abortions, neonatal or intrauterine deaths of unknown aetiology, placental abruption of unknown aetiology) were enrolled for the cases. These participants did not have any medical/surgical illness and there was no established cause for their losses and were willing to participate in the study.

Exclusion criteria

Patients and relatives not willing to participate in the study were excluded.

After enrolling a patient, she was given a questionnaire which included various socio-demographic details regarding her natal and marital family, relationship status and equation between patient and her partner. Also, detailed history of physical, psychological and emotional abuse was elicited. The coping mechanisms and future

plan of action of the victims was studied. Detailed medical/ surgical and reproductive history was noted and detailed physical examination was done. All the relevant investigations done for the patient as per the unit's protocol were studied.

After finding out that a certain patient had faced some form of violence, they were counselled and social worker reference was done for those who were willing for the same.

Statistical analysis

Data was obtained from enrolled patients after taking valid written informed consent. Percentages of various parameters were analysed. Test of significance applied here was Chi square test. P value of <0.05 is considered significant for the study.

RESULTS

In our study, overall 12.5% of the pregnant women had faced domestic violence. 7% of women with normal pregnancy outcome and 18% of women with adverse pregnancy outcome were victims of domestic violence (Table 1).

Table 1: Prevalence of domestic/intimate partner violence in pregnant women.

History of domestic violence	Normal pregnancy outcome (n=100)	Adverse pregnancy outcome (n=100)	Total
Present	07	18	25
Absent	93	82	175

100 patients enrolled in the study were with normal pregnancy outcome (i.e. a healthy baby with birth weight of at least 2.5kg, at term i.e. 37 weeks and beyond with a good APGAR score 9/10 at birth and no other neonatal morbidity or mortality associated).

Table 2: Normal outcome in current pregnancy (n=100).

Mode of delivery	Violence present	Violence absent	Total
Full term normal delivery	05	63	68
Assisted vaginal delivery	00	03	03
Elective lower segment caesarean section	00	03	03
Emergency lower segment caesarean section	02	24	26
All births	07	93	100

Mode of delivery was decided as per the obstetric indication at the time of labour). 7 out of them were victims of domestic violence (Table 2).

In adverse pregnancy outcome group, there were a few cases of direct injury due to violence. One of them had blunt trauma to the abdomen due to hitting and kicking. Two patients presented with incomplete abortion due to direct trauma to the abdomen. In our study, 44% of the women admitted with threatened abortion or threatened preterm labour were also victims of domestic violence with no other aetiology identified (Table 3).

Table 3: Adverse outcome in current pregnancy (n=100).

Outcome of current pregnancy	Violence present	Violence absent	Total
Complete abortion	01	02	03
Incomplete abortion	04	29	33
Missed abortion	00	13	13
Threatened abortion	06	04	10
Abortion due to PPROM	01	02	03
Still birth	02	02	04
PPROM/ Preterm delivery/ Low birth weight baby	03	24	27
Placental abruption	00	01	01
Threatened preterm labour	01	05	06

**PPROM- preterm premature rupture of membranes

After applying chi square test, Odds ratio was 2.916 and confidence interval was 1.159 to 7.335. p-value was 0.032 which less than 0.05. Hence the difference was statistically significant (Table 4).

Table 4: Association of domestic/intimate partner violence with adverse pregnancy outcomes.

History of violence given by patient	Outcome		p=0.032*
	Adverse pregnancy outcome (n=100)	Normal pregnancy outcome (n=100)	
Yes	18	7	p=0.032*
No	82	93	

*p<0.05 statistically significant, chi square test, Odds ratio: 2.916 [CI 1.159,7.335]

Other major findings in our study are as follows

Majority of our patients belonged to age group of 26-30 years (38.5%) and 21-25 years (36.5%). 40% cases of domestic violence were from the age group of 21-25 years and 28% cases of violence were from the age group of 26-30 years. 20% of the women were facing violence from the first year of marriage itself. Domestic violence was associated with 11.65% of arranged marriages and

16.21% of love marriages. Majority of our patients belonged to joint family. Domestic violence was found in 10.56% of pregnant women from joint families and 15.58% pregnant women from nuclear families.

In 60% of the study population, husband was illiterate or had not completed schooling. Out of them 17.5% had faced domestic violence.

Median value of husband's income in both the groups i.e. group with normal pregnancy outcome and the group with adverse pregnancy outcome was 8000 INR. per month with no intergroup difference.

In 64 cases, 32% in our series the partner had some form of addiction. In the patient where some form of addiction (smoking/tobacco chewing/ drinking alcohol) was present, 29.68% of them had faced domestic violence. 76% of the total domestic violence cases gave history of some form of addiction in husband. (Odds ratio 9.148, $p=0.0001$ and CI 3.43 -24.33)

Domestic violence was found in 13.46% of the women who had given dowry in some form as compared to 9.09% of the women of those who had not given dowry. This may be due to basic understanding between the families and also resolve of the natal family. Dowry can be considered as a form of violence itself (p value 0.438).

36% of the survivors of domestic violence had no freedom of choice in domestic matters at all whereas 44% had very less freedom of choice. 60% of the women with history of violence had no or limited freedom of choice and were also associated with adverse pregnancy outcome.

12% of the total women in study population had said that there was gender bias in their marital families. Of these 50% were also victims of domestic violence and 54% had adverse pregnancy outcome. 58.5% of the total women said that there was no such bias in their families and 29.5% women did not know clearly about it or had not spoken on this topic.

13 women out of 200 were not allowed contraception at all. Only 21% of the women interviewed had used contraception and 74% of the women gave history of no use of contraception. Since our study groups involve the reproductive age group of females with incomplete family, percentage of women not using contraception is higher. 54% of the women who were not allowed contraception faced domestic violence and rest of them were forbidden by religion or family beliefs. 31% of them had adverse pregnancy outcome. 62% of the total pregnancies ($n=200$) were unplanned. 17% of the women with unplanned pregnancy were also victims of domestic violence. 12% of the women with unplanned pregnancy had an adverse outcome. Or we can also say that 84% of the women who had faced domestic violence had an unplanned pregnancy. (Odds ratio 4.1250, $p=0.0076$, CI

1.3-12.5) 60% of the cases of domestic violence had repeated pregnancy or previous loss. All of the victims faced verbal abuse on a regular basis whereas 88% of the cases reported verbal, emotional and physical abuse.

Husband was perpetrator of violence in 72% of the cases of violence. Mother-in-law was the perpetrator of violence in 40% of the cases. Amongst other family members, sister-in-law was the perpetrator in 2 of the cases and in one case father was the perpetrator.

Major reasons for conflict as stated by our patients were monetary reasons (most common), household work related, not allowing the use of contraception, alcohol addiction, want of a male child, second marriage and suspicion of infidelity. 16% of the victims of domestic violence had no coping mechanisms or support system available to them and were thus trying to adjust to their situation.

Approaching social worker or filing of a police complaint was done by 24% of the victims. Four women out of twenty-five (16%) who were victims of domestic violence separated from their husband after episode of severe conflict with them in current pregnancy.

Inhibitions in leaving the abusive relationship were fear of stigmatization, financial dependence on the marital family and concerns about children's future.

DISCUSSION

Even though pregnancy is believed to be a physiological phenomenon, it can have serious health implications on both mother and child. It can range from hospital admission due to threatened abortion/preterm labour to life threatening events like placental abruption, severe haemorrhage to even maternal mortality. From various studies worldwide, incidence of domestic violence during pregnancy is between 8 to 15%.⁷⁻¹⁰ However, these figures represent only the tip of the iceberg. There is gross underreporting of cases of domestic violence.¹¹

A study was conducted by Clark LE et al in 2012 in the United States of America. A total of 641 women seeking healthcare facilities for various obstetrics and gynaecological complaints had participated in it. 16% of the women enrolled i.e. hundred and three, gave history reproductive coercion. Also, out of them 33 women also gave history of abuse by their partner. (95% CI 23-41%).¹² In another study conducted by Miller et al in Pennsylvania ($n=3539$), it was found that 177 of the women that is 5% of them admitted to the presence of reproductive coercion. Also, history of intimate partner violence was associated with unwanted pregnancy.¹³ In present study, it was found that 6.5% of the women were not allowed contraception at all. 54% of the women who were not allowed contraception were also victims of domestic violence. 31% of the women who were not allowed contraception had an adverse pregnancy

outcome. 62% of the total pregnancies in our study were unplanned and 84% of the women facing violence had an unplanned pregnancy. In a cross-sectional study conducted by Abo-Elfetoh et al in Saudi Arabia in 2014, it was found that husband was the perpetrator of domestic violence in nearly 77% of the cases and in nearly 4% of the cases other members of marital family were the perpetrators. Also, that highest risk of physical violence was during the first decade of marriage.¹⁴ According to the NHFS-3, husband was the perpetrator of violence in 87.5% of the cases. In our study, in 72% of the cases husband was the perpetrator of violence and in 40% of the cases it was mother-in-law.^{15,16}

CONCLUSION

Thus, through this study we would like to stress upon: The need for routine screening for violence in women of reproductive age group with vulnerable subset of pregnant women. Creating awareness and sensitivity amongst healthcare professionals and training them to identify and help these women. Providing adequate space and privacy to deal with these issues. Trained psychologists and social workers in hospitals. Display of Information-Education-Communication materials so that women know where to seek help from. Easily accessible healthcare to the victims. Providing social and legal support systems to victims of domestic/intimate partner violence. Lastly, we would like to quote a few recommendations mentioned in WHO Multi-country study on Women's health and Domestic Violence against women (2005). Multi-sectorial action plan to deal with domestic/intimate partner violence against women. Programmes aimed at primary prevention of violence. Strengthening Reproductive health services as they are often the entry point for women to seek help from authorities. Promoting and supporting research in this field. Increasing social and legal support system.

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