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Editor's Choice

Reproductive Health Care and the Professionals

Ministry of Health and Family Welfare, Govt of India, launched a new initiative namely SUMAN - "Surakshit Matriva Aashwan" with an aim to provide assured, dignified, respectful and quality health care at no cost and zero tolerance for denial of services for every woman and new born visiting the public health care facility. This is aimed to provide a positive birthing experience. The expected outcome of this new initiative is zero preventable maternal and newborn deaths and high quality of maternity care delivered with dignity and respect.

Violence of any form occurring during pregnancy has negative impact with increased morbidity and mortality for both the mother and the unborn child with a high rate of perinatal mortality. Domestic violence in India includes any form of violence suffered by a person from a biological relative. It is typically the violence suffered by a woman by male members of her family or relatives. According to a National Family and Health Survey in 2005, total life time prevalence of domestic violence was 33.5%.[1]

In 2014 National Institute of Health Care Excellence recommended guidelines for domestic violence and that is a part of education in undergraduate and post graduate curriculum so as to protect the woman at risk.[2]

Less than 200 years ago, a husband was legally allowed to physically abuse his wife, provided "the stick he used was smaller in diameter than his thumb".[3] Presently all over the world, the governments and professionals in health and society recognize this as an unacceptable public health issue.

Domestic violence is defined as 'any incident(s) of controlling, coercive, threatening behavior, violence or abuse between those aged 16 or more who are, or have been intimate partners or family members regardless of gender and sexuality'. This definition includes psychological, physical, sexual, emotional or other forms of abuse such as honor based violence.[4]

It is, however, too difficult to quantify the degree of severity of the problem because not all cases are reported. Victims may not like to disclose the violence because of fear of social stigma or that they will not be believed. Moreover it may be due to fear of consequences. On the other hand healthcare professionals unless skilled or trained often lack experience or awareness to enquire about the events.

Over the years, Reproductive Health (RH) has been recognized as a human right. Based on the framework in India, comprehensive care is provided to women and children through five pillars of reproductive, maternal, neonatal, child and adolescent health. The programs and strategies developed are guided by central tenets of equity, universal care, entitlement and accountability to provide "continuum of care".

The guidelines of National Health Mission for Maternal and Newborn Care (2017) introduced the major transformational change. This in relation to "Respectful Maternal Care" (RMC) covering the entire period of antenatal, intrapartum and postpartum care. Respectful Maternity Care allows the caregiver to provide the essential as well as the comprehensive care to the woman with respect. It includes respect for woman's autonomy, dignity, privacy, feelings, choices, freedom from all ill treatment and coercion. It includes the consideration for personal preferences including the option for companionship during the intrapartum period.[5]

The practice of respectful maternity care for a woman in labor is to provide her the privacy with a separate room or a cubicle. She should have her freedom for

a comfortable position (squatting, standing) during birthing and to have the initiation of breastfeeding within an hour of birth.

Changes in maternity care practice

What is more important for any caregiver to adhere strictly and to avoid any such odd practice as discussed below during the course of labor. The caregiver should not make any verbal or physical abuse to the pregnant woman. No such out of pocket expenditures on drugs, or diagnostics is permitted. There should not be any demand by the staff for gratuitous payment by the family members.

On the other hand, we the clinicians, should note that there are significant changes in maternity care practice. The clinician should refrain from performing many procedures what evidence has discarded. We should refrain from performing routine episiotomy. Women should be given adequate pain relief during the course of labor. Pain when severe, has its effect on the health of the mother and the labor course adversely. The caregiver should have the woman's consent (at least verbal) when episiotomy or any form of assisted vaginal delivery (forceps /Ventouse) is made.

The area of contraceptive counselling must be with adequate information. This is done to help the woman to make an informed voluntary choice. National Medical Commission (NMC) directs counselling and consent taking is an essential part of our medical curriculum. Clinicians need to develop the skill for themselves and to train present medical students and residents.

These days most women are discharged from the institutional delivery either with adequate information about contraception or with some form of the contraceptive measures (Postpartum IUCDs, injectables (DMPA) or sterilization (tubectomy) to avoid unplanned pregnancy.[6] Unfortunately unless they are adequately counslled, often they are unhappy to continue the method and ultimately it becomes a program failure. Each post partum woman should have the information and understanding about the individual method with its correct usage, method it works, side effects if any, when to return to the clinic, including return of fertility following discontinuation.[7] It is not uncommon to see many women suffer from unplanned pregnancy as they do not get the opportunity to come to the clinic for post partum follow-up. This is also the problem for women following medical termination of pregnancy. Often they leave the hospital without any measures against unplanned pregnancy.

Govt of India stressed on the use of postpartum or post abortal contraception before the women leave the hospital so that they are protected well ahead. Introduction of competency based curriculum (2018) for the undergraduates is expected to bring significant change in India.[8]

The article Dr Reddy and Dr Ali, (p.117) is to tell us the existing practice in maternal and child health care in certain places. Good part is that authors have observed significant changes in practice over most of the other centers. It is clear that the knowledge of RMC is the primary concept that we must accept and develop. Otherwise, it is to be remembered that, universal practice of the RMC is the need of the day.

RMC is primarily aimed to reduce maternal and perinatal morbidity and mortality. This improves the quality of care during labor, delivery and postpartum. Areas of contraception and safe abortion are also included. Above all it enhances the satisfaction of the beneficiaries attending the health care facilities.

Prof (Dr) Hiralal Konar
Editor-in-Chief

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Original Article - Obstetrics

An Audit of Maternal Near Miss and Mortality Cases in a Tertiary Care Rural Teaching Hospital in Eastern India —A One Year Record Based Observational Study

Nishat Parveen Begg,[1] Swarup Chowdhury,[1] Picklu Chaudhari[2]

Abstract

OBJECTIVE: To evaluate the characteristics of near-miss obstetric cases along with maternal deaths from June 2019 to May 2020 in the Department of Obstetrics and Gynecology, Rampurhat Govt Medical College and Hospital.

STUDY DESIGN: A Record based Observational Study.

SETTING : Rampurhat Govt Medical College and Hospital, Rampurhat, Birbhum.

STUDY POPULATION: All near miss and maternal mortality cases at RGMC&H, from June 2019 - May 2020.

METHODOLOGY: All near-miss obstetric cases along with maternal deaths in the study population were evaluated with respect to various characteristics. Methods to improve the rates were suggested.

RESULTS: During the study period, there were 10,452 deliveries in our institution, 10142 live births, CCU admission rate was 21.9 per 1000 deliveries, 50 near miss cases and 25 maternal deaths. The Maternal Mortality Ratio (MMR) was 246.4, Maternal Near Miss Ratio was 0.49.

The mean age in the near miss group was 23.22 ± 4.3 years, mostly multigravidas and 23.16 ± 6.39 years in the maternal mortality group, mostly primigravidas.

Most cases were unbooked term pregnancies (94% in near miss group, 84% in the maternal mortality group) from rural side, referred from peripheral centers.

The majority of patients in the near miss group had obstetric hemorrhage (44%, mostly from ruptured uterus), followed by eclampsia and pre-eclampsia (40%), while the maternal mortality group had eclampsia and pre-eclampsia (32%) followed by pulmonary embolism (26%) and obstetric hemorrhage (20%).

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24% of the patients required inotropic support, 18% needed ventilator support, and 4% needed cardiopulmonary resuscitation in the near miss group. In the maternal mortality group, almost 100% patients were put on inotropic and ventilator support and had undergone cardiopulmonary resuscitation (CPR).

Majority in both the groups came in a very poor condition reflecting delays in seeking help, or in the referral system.

CONCLUSION: There should be strict screening protocols from the first antenatal visit itself, and faster referral systems.

Introduction

A maternal death is one of the most devastating complications in obstetrics, with wide-ranging implications for both the family and the staff involved.

A maternal death (as cited in International Classification of Disease or ICD-10, [WHO, 1992]) is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy, and can stem from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

The maternal mortality ratio is calculated as:[1]

$$\frac{\text{All maternal deaths occurring within a reference period (usually 1 year)} \times 100{,}000}{\text{Total \# of live births occurring within the reference period}}$$

A woman presenting with any life threatening conditions and surviving a complication that occurred during pregnancy, childbirth, or within 42 days of termination should be considered as a near miss or severe maternal morbidity.[2]

The WHO near miss criteria includes:[16]

Clinical criteria includes: acute cyanosis, gasping, respiratory rate >40 or <6/min, shock, oliguria non responsive to fluids or diuretics, failure to form clots, loss of consciousness lasting >12 h, cardiac arrest, stroke, uncontrollable fit/total paralysis, jaundice in the presence of pre-eclampsia;

Laboratory based criteria includes : oxygen saturation <90% for ≥60 minutes, Pao2/fio2<200mm Hg, creatinine ≥300µmol/l or ≥3.5 mg/dl, bilirubin >100 µmol/l or >6.0 mg/dl, ph<7.1, lactate >5 meq/ml, acute thrombocytopenia (<50,000 platelets/ml), loss of consciousness and ketoacids in urine.

Management-based criteria includes: use of continuous vasoactive drugs, hysterectomy following infection or haemorrhage, transfusion of ≥5 units of blood, intubation and ventilation for ≥60 minutes not related to anesthesia, dialysis for acute renal failure, cardio-pulmonary resuscitation.

The maternal mortality in India is still 122 per 100000 live births despite different safe motherhood programs.

The aim of this study is to evaluate the characteristics of near-miss obstetric cases in a tertiary care hospital as near-miss patients provide first hand knowledge of remote and immediate factors that may be linked to morbidity and mortality during pregnancy or within 42 days of its termination. The near-miss concept also allows initiation of awareness-based preventive strategies to enhance the quality of maternal healthcare. Although the objective criteria for defining severe maternal morbidity vary between studies, its prevalence ranges from 0.05%-1.7% in developed countries[3,4] and 0.6%-8.5% in resource-limited countries.[5,6]

Materials and Methods

The present study is a retrospective cohort study analyzing all maternal near miss cases of a 192-bedded gynecology and obstetrics department of a peripheral government medical college and hospital over a span of 1 year (June 2019-May 2020). They are analysed along with all maternal death cases in the given time period.

Data Collection

The medical records of all obstetric patients (pregnant or within to 6 weeks postpartum) fulfilling near miss criteria along with other obstetric patients getting admitted to the critical care Unit (CCU) during the study were analyzed. The following data were recorded and analyzed for each near miss patient: age, parity, primary diagnosis (obstetric or non obstetric disease process identified to be responsible for the patient's critical illness), criteria for near miss, indication of CCU admission, obstetric interventions performed, critical care interventions performed

during CCU stay (mechanical ventilation), duration of mechanical ventilation, length of CCU stay and outcome. The following data are recorded for patients having maternal mortality: age, parity, primary diagnosis (obstetric or non obstetric disease process identified to be responsible for the patient's critical illness), obstetric interventions performed, critical care interventions performed (mechanical ventilation, inotropic support), cause of death.

Statistical Analysis

All categorical data were expressed as proportions or percentages. Statistical analysis was performed using SPSS (version 20.0, IBM Corporation, New York, USA). The categorical data analysis was done either by Fischer's exact test or Chi-square test, as applicable. The numerical data were analyzed by unpaired t-test or ANOVA for normal distribution and by Mann-Whitney U-test or Kruskal-Wallis H-test if it was not distributed normally. The statistical significance implies $P < 0.05$.

The Institutional Ethics Committee approved the study.

RESULTS

TABLE 1

Clinical Parameters	NEAR MISS	MATERNAL DEATH
Mean age in years	23.22 +-4.310831	23.16+- 6.39
Urban/Rural	90% RURAL 10% URBAN	94% RURAL 6% URBAN
Education	75% HIGH SCHOOL 25% UNEDUCATED	73% HIGH SCHOOL 27% UNEDUCATED
Primi/Multi	42% PRIMI 58% MULTI	64% PRIMI 36% MULTI
Booked/Unbooked	6% BOOKED 94% UNBOOKED	16% BOOKED 84% UNBOOKED
Referred	80% REFERRED 10% DIRECT	75% REFERRED 25% DIRECT
Preterm/Term	PRETERM=14% TERM=82% ECTOPIC=4%	PRETERM=32% TERM=68%

The mean age in the near miss group is 23.22 ± 4.3 years while in the maternal mortality group is 23.16+-6.39 years.

The majority of women in both the groups were from rural side with high school level education well below the age of 30 years.

The near miss group mostly had multigravidas (58%), while majority were primigravidas (66%) in the maternal mortality group.

Most cases were unbooked term pregnancies (94% in near miss group, 84% in the maternal mortality group) and referred from peripheral centres in both the groups.

TABLE 2

PRIMARY DIAGNOSIS	NEAR MISS GROUP	MATERNAL MORTALITY GROUP
Repeated Eclampsia	14 (28%)	3 (12%) CVA
Left ventricular failure	6 (12%)	5 (20%)
Sepsis	3 (6%)	1 (4%)
Heart Disease	3 (6%)	1 (4%)
Renal Failure	1 (2%)	1 (4%)
Hemorrhagic Shock	22 (44%) Ectopic-2 Abruptio-3 PLC Previa-5 PPH-4 Rupture Uterus-7 UT Perforation-1	5 (20%) PPH-Primary-1 2 Dary-1 Uterine Inversion-1 Ectopic-1 APH Abruptio-1
Pulmonary Embolism	1 (2%)	6 (24%)
COPD		1 (4%)
Jaundice		1 (4%)
Cardiogenic Shock		1 (4%)

TABLE 3: Near Miss Criteria

CLINICAL CRITERIA	SHOCK	21(42%)
	Oliguria non responsive to fluids or diuretics	1 (2%)
	Uncontrolled fist/total paralysis	14 (28%)
	Gasping	1 (2%)
	Respiratory rate >40 or <6/min	10 (20%)
LABORATORY-BASED CRITERIA	Oxygen saturation <90% for ≥60 minutes	10 (20%)
MANAGEMENT-BASED CRITERIA	Use of continuous vasoactive drugs	12 (24%)
	Hysterectomy following infection or hemorrhage	15 (30%)
	Transfusion of ≥5 units of blood	6 (12%)
	Intubation and ventilation for ≥60 minutes not related to anaesthesia	9 (18%)
	Cardio-pulmonary resuscitation	2 (4%)

TABLE 4

MATERNAL MORTALITY GROUP	YES	NO
CPR	100%	0%
Inotropic Support	100%	0%
Ventilator Support	100%	0%

Shock, mostly from obstetric hemorrhage, was also the most common criteria for near miss as per our study, followed by obstetric hysterectomy and uncontrolled eclampsia. In our study, 24% of the patients required inotropic support, 18% of the patients needed ventilator support, and 4% of the patients needed cardiopulmonary resuscitation in the near miss group. In the maternal mortality group, almost 100% patients were put on inotropic and ventilator support and had undergone CPR.

TABLE 5

INTERVENTION	NEAR MISS	MATERNAL MORTALITY GROUP
Vaginal delivery	13 (26%)	7 (28%)
Cesarean section	23 (46%)	11 (44%)
Laparotomy for ectopic	2 (4%)	1 (4%)
Hysterectomy	15 (30%)	3 (25%)
Undelivered		3 (12%)
Patient (%) who had come in bad condition	68%	87%

Most of the patients in the near miss group (68%), and the maternal mortality group (87%) came in a very poor condition reflecting delays either in the patients seeking help, or delays in the referral system.

Discussion

During the study period (June 2019 to may 2020), there were 10,452 deliveries in our institution, 10142 live births. The CCU admission rate was 21.9 per 1000 deliveries. There were 50 near miss cases during this time and 25maternal deaths. The Maternal Mortality Ratio (MMR) during this time was 246.4. The current MMR for 2015-2017 in India is 122 per 1 lakh live births as per the recently released Sample Registration System (SRS) 2015-2017 bulletin for MMR.[7] The sustainable development goals: Goal 3 (Target 3.1) has set a global target to reduce MMR to < 70/lakh live births by 2030.[8] Thus the rate is pretty high in our Institute and a scrutiny into the various near miss and mortality cases will help us to improve our performances and find out any drawbacks in our current management.

The Maternal Near Miss Ratio which is the number of maternal near miss cases per 1000 live births was 0.49 in our institute. The Maternal Near Miss Mortality Ratio which is the ratio between maternal near miss cases and maternal deaths. A higher ratio indicates better care.[9]

The mean age in the near miss group is 23.22 ± 4.3 years while in the maternal mortality group is 23.16+-6.39.

This is similar to other Indian studies[10,11] and to other studies[12,13] in developing countries.

The majority of women in both the groups were from rural side with high school level education which might contribute to the high incidence of severe maternal morbidity cases in patients well below the age of 30 years.

The near miss group mostly had multigravidas (58%), while majority were primigravidas (66%) in the maternal mortality group. There is high incidence of PPH in the near miss group and high incidence of hypertensive disorders in the maternal mortality group.

Most cases were unbooked term pregnancies (94% in near miss group, 84% in the maternal mortality group) and referred from peripheral centres in both the groups.

The study from Sudan[14] by Alemu et al showed more cases in the urban side, mostly among uneducated or with primary level school education, multiparous women who were self referred. The study from Zimbabwe by Chikadaya et al[13] also showed mostly multiparous women, most with high school level education, referred from private clinics. Majority of near miss cases were among preterm patients in a study by Lotufo et al while other studies mostly showed term pregnancies.[12,13,14]

Indian studies revealed more near miss cases in both the primigravida group and in multigravida group.[10,15] The majority of patients in the near miss group in our study had a primary diagnosis of obstetric hemorrhage (44%) followed by eclampsia and pre-eclampsia cases (40%), while in the maternal mortality group was eclampsia and pre-eclampsia cases (32%) followed by pulmonary embolism (26%) and obstetric hemorrhage (20%). This is similar to the study by Rathode et al[9] and Chikadaya et al[12] except for the incidence of pulmonary embolism in post operative patients which was unusually high in our institution. Other Indian[11,15] and International studies[9,12,14] mostly revealed obstetric hemorrhages followed by hypertensive disorders to be most common cause of both maternal near miss and maternal mortality.

A categorisation of the obstetric hemorrhage cases in the near miss group shows maximum incidence of the ruptured uterus cases unlike the study by Purandare et al[11] where most cases were in postpartum patients (31%). One case was an in house rupture uterus following a trial of labor in a post CS pregnancy which finally expired of pulmonary embolism, the rest were referred following trial of labor in multigravida women outside. In the maternal mortality group, majority were primary PPH cases (40%).

Shock, mostly from obstetric hemorrhage, was also the most common criteria for near miss as per our study, followed by obstetric hysterectomy and uncontrolled eclampsia. Use of vasoactive agents, obstetric hysterectomy, 5 or more units of PRBC transfusion and use of mechanical ventilation was the leading causes for near miss as per the study by Lotufo et al.[12]

In our study, 24% of the patients required inotropic support, 18% of the patients needed ventilator support, and 4% of the patients needed cardiopulmonary resuscitation in the near miss group. In the maternal mortality group, almost 100% patients were put on inotropic and ventilator support and had undergone CPR.

This is much lower as compared to the study in Brazil by Lotufo et al,[12] but similar to Indian studies by Purandare et al.[11]

Most of the patients in the near miss group (68%), and the maternal mortality group (87%) came in a very poor condition reflecting delays either in the patients seeking help or delays in the referral system. This is primarily due to lack of awareness among the patients of this area about the importance of timely and adequate antenatal checkups, availability of facilities existing at tertiary level centers, existence of different incentives by the government after hospital delivery. Better mobilisation of the population to hospitals by ANM and ASHA workers can reduce this delay. There has been a delay in referral in few cases from the peripheral health care centers like most cases of postpartum hemorrhage following prolonged labor which could have been managed better had they been referred earlier. The study by Purandare et al[11] in India also reflected the delay in the referral system. In fact in the near miss group, only the patients with recurrent convulsions and in the maternal mortality group, the patients with pulmonary embolism deteriorated in the institution, despite management. There was also a case of eclampsia which developed cerebrovascular accident (CVA) two days postoperatively where the high blood pressure could have been managed better. The rest of the cases were admitted in very poor condition. Two of the cases had to be referred out due to lack of dialysis facility in a case of renal failure and lack of FFP in a case of jaundice and expired at the referred centre.

Conclusion

Maternal health being a priority of any nation, a careful scrutiny into the causes of near miss and maternal mortality will help us to correct any defects in the existing practice. As we see from our study, since most women had very poor education status, improving the educational status of the population in general should be first priority.

The most common cause of near miss is obstetric haemorrhage, mostly from rupture uterus cases. Better management of labour in the peripheral referral centres, timely referral, maintaining partograph and improving the Hb status of women can be done to improve the scenario. The residents should also be well trained in systemic devascularisation procedures, internal iliac ligations and obstetric hysterectomies.

Since most cases in the maternal mortality group were among the hypertensive disorders in pregnancy, strict antenatal follow up, blood pressure monitoring, proper intake of medications, and timely referral to higher centers should be ensured by ASHA, ANM workers and doctors at peripheral referral centers.

The second most common cause of maternal mortality being pulmonary embolism at our institution, early mobilisation of post operative patients and use of thromboprophylaxis where indicated should be ensured.

Proper HDU, CCU and blood bank facilities should be available.

Thus in conclusion we would like to say that there should be strict screening protocols from the first antenatal visit itself, and a multidisciplinary team should be set alert in tertiary care centers in order to initiate treatment without delay once such critical cases are admitted.

List of Abbreviations: CPR - Cardiopulmonary Resuscitation; VD - Vaginal Delivery; CS - Cesarean Section; COPD - Chronic Obstructive Pulmonary Disease; LVF - Left Ventricular Failure; HDU - High Dependency Unit; CCU - Critical Care Unit; FFP - Fresh Frozen Plasma; PPH - Post Partum Hemorrhage.

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Original Article - Obstetrics

An Experience of Addressing Obstetric Violence in the Public Health Facilities of Bihar

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Abstract

Obstetric violence has been regarded as a form of violence against women and violation of the woman's rights. It is a worldwide and frequent problem observed during childbirth both by the public and private health care providers. Some minor or major form of obstetrics violence's are observed at almost all health facilities irrespective of the geography, region, socio-economic situation, religion and caste of beneficiaries. Though many programs are available to reduce obstetrics violence in health facilities, however its effective implementation and monitoring are still a biggest challenge for the health facilities. A Respectful Maternity Care model has been piloted in the Maternal Newborn Care Unit of District Hospital Purnea in Bihar along with regular client satisfaction survey and promoting birth companion to address the obstetrics violence and disrespect related issues of childbirth to pregnant women. During a period of six-month of the pilot, patient satisfaction score has improved from less than 50% to more than 90% during 2018 and helped the facility to qualify as the first ever National LaQshya Certified Labour Room among the Aspirational Districts of India. After the successful Purnea model of respectful maternity care, this has been upscaled in the remaining LaQshya identified health facilities in Bihar.

Introduction

The term 'obstetric violence' has been used to define the ill-treatment, disregard, abuse and insensitive care of women during childbirth by the health care providers. This treatment is regarded as a form of violence against women and violation of the woman's rights. It is a worldwide and frequent problem observed during childbirth both by the public and private health care providers. Obstetric violence has the ultimate effect of preventing women from seeking pre-natal care, newborn care and using other health care services at the health facilities. The abusive relationship and loss of trust between women and health providers can create great reluctance to obtain medical assistance during childbirth. Disrespectful and abusive treatment can be experienced during pregnancy too. During childbirth, a woman is very vulnerable and cannot protect herself. Results of this abuse can be very negative consequences for both the infant and the mother.

Background

Department of Health, Govt. of Bihar and its program implementing body State Health Society Bihar has taken many initiatives to reduce obstetrics violence and to ensure respectful care to each pregnant

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woman coming for institutional delivery. Few of the key initiatives taken by Health Department those either directly or indirectly contributing to reduce obstetrics violence are Respectful Maternity Care at the Health facilities, Mera Aspatal Application and Client Satisfaction Survey to obtain feedback from the beneficiaries on the quality, attitude and behavior of service providers towards the beneficiaries, Grievance Redressal system to comply the dissatisfactions perceived by the care receiver, Birth Companion to allow an previously experienced attendant of the mother choice to stay during the process of labor, delivery and recovery with the mother, Surakshit Matritva Aashwasan (SUMAN) - An initiative focuses on assured delivery of maternal and newborn healthcare services encompassing wider access to quality care services, at no cost, zero tolerance for denial of services, assured management of complications along with respect for women's autonomy, dignity, feelings, choices and preferences, etc., LaQshya- Labour Room Quality Improvement Initiative, Kayakalp - to ensure a safe healthy environment with focus on privacy, cleanliness and client satisfaction, Midwifery Led Care Units (MLCUs) to avoid unwanted forced Caesarean Sections. Though a lot of programs available to reduce obstetrics violence in health facilities, however its effective implementation and monitoring are still a biggest challenge for the health facilities.

Methodology

After the Ministry of Health and Family Welfare, Govt. of India and State Health Society Bihar's guidelines to ensure quality maternal and newborn care with client centric health care services at the health facilities, a respectful maternity care model was piloted in District Hospital Purnea during 2018. Initial 6 months of the study was dedicated for implementation of the pilot including capacity building of service providers and addressing gaps of ensuring respectful maternity care, the remaining 6 months were allotted to understand the impact and sustainability of the model. Pregnant Women coming for institutional delivery were the study participants and an objective structured client satisfaction survey checklist designed in Hindi was used to obtain responses of the mothers in the scale of 1-5, where "1" indicates highly unsatisfied and "5" indicates highly satisfied. At least one post-natal mother was randomly interviewed everyday just before her discharge from the maternity ward by using the prescribed checklist to collect her perceived satisfaction level during her stay and management she received. The total process of data collection, compilation and analysis was facilitated by the facility quality circle team. Every month the analyzed data were reviewed by the quality circle team and quality assurance team, and accordingly time bound actions were made to achieve the ultimate objective of more than 90% client satisfaction. Apart from this the qualitative maternal and newborn care data during pilot and post pilot (post LaQshya certification) were also analyzed to understand the sustainability and impact of this model on the maternal and newborn health services rendered at this facility.

Results and Discussion

Some minor or major form of obstetrics violence's are observed at almost all health facilities irrespective of the geography, region, socio-economic situation, religion and caste of beneficiaries.

An integrative review of the various articles published for obstetrics violence in India was carried out by Surabhi, Muthuswami et al. (2019)[1] observed that eight different categories i.e. (1) physical abuse, (2) sexual abuse, (3) verbal abuse, (4) stigma and discrimination, (5) failure to meet professional standards of care, (6) poor rapport between women and providers, (7) health system conditions and constraints, and (8) harmful traditional practices and beliefs' emerged as key domains from the Indian literature showing disrespect to mothers during the process of child birth by the health care providers at both public and private birth facilities in India. 'Obstetric violence' in India was found to be associated with socio-demographic factors, with women of lower social standing experiencing greater levels of mistreatment. In response to this normalized public health issue, a multi-pronged, rights-based framework was proposed that addresses the social, political and structural contexts of 'obstetric violence' in India.

A recent study led by the World Health Organization where more than 2,000 women during labor and more than 2,600 women after childbirth interviewed says that, 42% mothers reported physical or verbal abuse or discrimination during childbirth, more than one-third of women in four low-income countries in Africa and Asia were slapped, mocked, forcibly treated or otherwise abused during childbirth in health

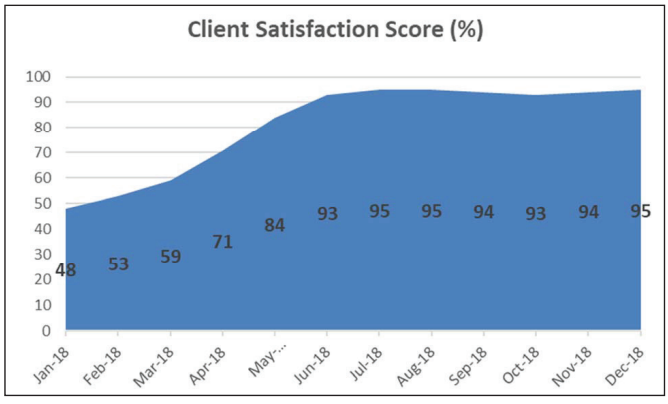

Fig-1: Client Satisfaction Score Trend during January-December 2018

centers and suggests that such mistreatment occurs worldwide.[2] Younger, less-educated women are at risk of such mistreatment which also includes neglect by health workers or the use of force during procedures, the study said.[2] The study suggested allowing women to have a companion of their choice present during childbirth, improving the informed consent process and redesigning maternity wards to improve privacy.

The Lancet medical journal says women in Nigeria, Myanmar, Ghana and Guinea also experienced high rates of caesarean sections and surgical cuts to the vagina, or episiotomies, without their consent and often without a pain killer.[3] This study also revealed that, more than 40% of observed women and 35% of surveyed women experienced mistreatment. The study also says that, adolescents, migrant women, women infected with HIV, and ethnic minority women are more likely than others to experience abuse during child birth.[3]

Abusive practices during maternal care have also been widely reported across Latin America, where Venezuela became the first country to legislate against specific unethical practices by adopting a law to ban so-called "obstetric violence" in 2007.[4]

In line with the Govt. of India and State Health Society Bihar's guidelines, the respectful maternity care model was piloted in the Maternal Newborn Care Unit (Fig-2) of District Hospital Purnea in Bihar along with regular client satisfaction survey and promoting birth companion. During the beginning of pilot in January 2018, the baseline client satisfaction level was only 48% and after successive follow up for improvement, it reached to 93% just within a span of six-month period of the pilot and there after it consistently maintained above the level of 90% satisfaction level (Fig-1). This also helped the facility to qualify as the first ever National LaQshya certified Labor Room among the Aspirational Districts of India in July 2018.

Trend of Maternal and Newborn Health Care Indicators of District Hospital Purnea (Fig-2) during and after the Respectful Maternity Care Pilot Model showed that total delivery, cesarean section ,blood transfusion and pregnant women with obstetrics complications management has increased 56%, 85%, 53% & 110% respectively. This was mostly due to the increase in trust and confidence of beneficiaries towards the client

S.N	Period	Pilot Period						Post Pilot/LaQshya Certification Period						Monthly Average		
	Indicators	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Pre	Post	Change
A	Normal Delivery	545	560	545	460	490	442	666	871	834	881	702	685	507	773	52%
B	C Section	47	54	54	72	70	59	83	138	135	115	96	84	59	109	85%
C	Total delivery	592	614	599	532	560	501	749	1009	969	996	798	769	566	882	56%
D	Still Birth	13	18	19	11	7	12	27	31	24	18	20	18	13	23	
	SBR	22	29	32	21	13	24	36	31	25	18	25	23	23	26	3%
E	Fresh	3	6	5	4	2	2	6	7	7	6	3	5	4	6	
	Fresh SBR	5.1	9.8	8.3	7.5	3.6	4.0	8.0	6.9	7.2	6.0	3.8	6.5	6	6	0%
F	Macerated	10	12	14	7	5	10	21	24	17	12	17	13	10	17	
	Macerated SBR	16.9	19.5	23.4	13.2	8.9	20.0	28.0	23.8	17.5	12.0	21.3	16.9	17	20	3%
G	Pregnant women with Obstetric Compilation managed	156	122	229	215	27	231	315	379	358	335	380	283	163	342	110%
H	Number of complicated prenancies treated with blood transfusion	101	92	47	182	138	92	203	286	245	88	67	115	109	167	53%
	Perinatal Asphyxia	45	43	36	38	39	35	43	49	58	37	28	45	39	43	
I	Perinatal Asphyxia Rate	7.6	7.0	6.0	7.1	7.0	7.0	5.7	4.9	6.0	3.7	3.5	5.9	7.0	4.9	2.1%
J	Maternal Death	0	1	4	3	4	2	0	3	5	3	0	3	2	2	0%
K	Neonatal Death in LR	0	0	0	0	2	1	0	0	0	0	0	0	1	0	100%

Fig-2: Trend of Maternal and Newborn Health Care Indicators at DH Purnea.

centric services rendered at District Hospital Purnea. Though, there was an increase in Stillbirth of 3% reported during the comparison period, however these are mostly macerated stillbirths and typically due to the last-minute referral of complicated cases from other health facilities. Perinatal birth asphyxia rate has been reduced by 2.1%, not a single neonatal death reported after the pilot and no change in maternal death numbers reported during the comparison period in spite of the surge in total delivery, C-section and management of complicated pregnant mothers at District Hospital Purnea, which indicates the quality of maternal and newborn care being rendered at this health facility.

A similar documentary film developed by NDTV in India during 2018-19 also shows that disrespect by service providers exists in the different level of public health facilities across the country, even mothers too mentioned that Government Ambulance drivers were also asking money to transport pregnant women to the health facilities. However, it also shows that the positive aspect of Respectful Maternity Care rolled out under the LaQshya program has a tremendous promising result in reducing incidences of Obstetrics Violence in the health facilities.

Though the term obstetrics violence or disrespectful maternity care is a quite subjective and there was no clear-cut definition available to define respectful care, however after many international and national studies, publications and guidelines on respectful care finally Govt. of India is now able to classify all types of disrespects faced by mother during childbirth into seven domains to ensure respectful maternity care in the public and private health facilities. These seven domains include 1) Physical abuse refers to hitting, pinching, restraining, not giving pain-relief medication and even rape/sexual assault, 2) Non-confidential care means that the woman was exposed or has any personal medical information disclosed without consent, 3) Non-consented care refers to when procedures such as caesarean section or sterilization, were not explained before being performed, 4) Non-dignified care refers to a provider being scolding, threatening, negative or discouraging, 5) Discrimination within this context refers to refusing care because of age, medical background, or cultural/ language background, 6) Abandonment or Denial of care is when a provider is absent, the patient is ignored or denied companionship from loved ones, 7) Lastly, detention in facilities refers to when providers will not let a patient leave because of outstanding balances, unpaid bribes etc.

Based upon the above seven disrespects Govt. of India has adapted the Respectful maternity care model to ensure the Universal Rights of Childbearing Women in Seeking & Receiving Maternity Care Before, During and After Childbirth. Which includes seven rights of respectful care i.e. 1) Freedom from harm and ill treatment, 2) Right to information, informed consent and refusal, and respect for choices and preferences, including companionship during maternity care, 3) Confidentiality & privacy, 4) Communication with dignity and respect, 5) Equality, freedom from discrimination, equitable care, 6) Right to timely healthcare and to the highest attainable level of health and 7) Liberty, autonomy, self-determination, and freedom from coercion.

After the successful Purnea pilot model of Respectful Maternity Care, this has been scaled up in the remaining LaQshya identified health facilities in Bihar and currently till October 2020 a total of 11 Health facilities were National LaQshya certified and another 15 facilities were State LaQshya certified due to meeting the standards of quality of maternal newborn care with client centric services.

Recommendation:

Obstetric violence embodies a violation of human rights and a serious public health delinquent and is revealed in the form of careless, irresponsible, inequitable and disrespectful acts practiced by health care providers. Hence the Policy Makers, Department of Health including Medical Fraternity, Health Managers, Professional bodies, Development Partners should come forward to end any form of violence during childbirth through enforcing the rights of mother, awareness generation. This is to ensure environment and capacity building of the stakeholders with greater emphasis on the rights of women for dignified, respectful healthcare. It is also essential to generate data related to respectful and disrespectful care practices, systems of accountability and meaningful professional support.

Acknowledgment:

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Conflicts of interest:

NIL

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Case Report with Obstetric Review

Atypical Preeclampsia Complicated with Hellp Syndrome and Huge Ascites — A Rare Case Report and Review

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Abstract

Preeclampsia-eclampsia syndrome is a common cause of maternal mortality and morbidity all over the world including India (3%-15%).The perinatal mortality in these cases is also high ranging between 7.4 and 34%.[1] Presented here, a case of atypical preeclampsia, complicated with HELLP Syndrome and huge ascites. Presentation in this case was severe, due to the association of many other high risk factors. Her preexisting health condition with polycystic ovarian Syndrome (PCOS) and insulin resistance had its far reaching metabolic consequences during the pregnancy. She needed early preterm delivery as an emergency. Baby suffered the dual problem of prematurity and growth restriction.

Case Report

A 24 year old, G1 (P0+0+0+0) was seen in the antenatal clinic at her 10 weeks of gestation. This pregnancy was following investigations and treatment of sub fertility over the past 3 years. She was treated in the same institute. She suffered anovulation with PCOS and insulin resistance. She conceived following ovulation induction. During the antenatal visits, she developed hypertension and diabetes mellitus at 14 weeks and 16 weeks respectively. She had the family history of hypertension with both the parents, but no history of diabetes mellitus. She was started oral antihypertensive drug (labetalol) and oral hypoglycemic drug (metformin) in consultation with a diabetologist. Subsequently Inj. human insulin was added for the control of plasma glucose.

At 27 weeks, her BP increased, systolic: 140-160 mm of Hg and diastolic: 90-106 mm of Hg, despite the use of oral medications. She developed preeclampsia superimposed on essential hypertension with proteinuria (2+).

She was admitted for monitoring of pregnancy and further investigations. Besides the routine, special investigations were: complete blood count (CBC) including platelet count, plasma glucose, HbA1C, Liver function test (LFT), Renal function test (RFT) (creatinine), ophthalmoscopic examination, urine routine examination (R/E) and culture and sensitivity (C/S) (Tables 1 and 2).

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She was under multidisciplinary team care of obstetrician, physician and diabetologist. Fetal surveillance continued in the 1st trimester screening (nasal bone, nuchal translucency, Pregnancy associated plasma protein –A (PAPP-A), βhCG) as well as 2nd trimester anomaly scan and echocardiography. Both the 1st (13 weeks) and 2nd trimester (20 weeks) sonographic reports were within normal limits.

With the progress of pregnancy, drug dose schedule for control of BP and plasma glucose had to be adjusted from time to time. She was on oral labetalol and calcium channel blocker (nicardia retard) with a goal to maintain BP: systolic ≤160 and diastolic ≤105mm of Hg. For control of plasma glucose, she received Inj. human insulin 20U-10U-12U each before breakfast, lunch and dinner. Most of the investigations were repeated at an interval of 2-3 weeks depending on the level of BP and plasma glucose. (reports presented below)

Fetal growth profile USG scan was repeated at 29+ weeks of gestation. Sonography including Doppler Studies of the major fetal blood vessels revealed, single live fetus with growth restriction, reduced diastolic flow of the umbilical artery, diminished liquor, placental calcification and estimated fetal weight was 930 gm. Investigations as mentioned above were repeated including the coagulation profile (hepatic transaminases, prothombin time (PT), activated partial thromboplastin time (APTT), Fibrinogen, fibrin degraded products (FDP) (Tables 1, 2).

She was given corticosteroid, Inj. betamethasone (12mg) at an interval of 24hrs primarily for the enhancement of fetal pulmonary maturity.

At 31+ week's patients' blood pressure worsened: systolic 180-200 and diastolic 110-120 mm of Hg despite the medical therapy. She was started with IV Labetalol along with oral nicardia retard. Dose of Inj. human insulin had to be increased to 28U-18U-16U.

Her investigation parameters warned the onset of HELLP Syndrome with impending coagulation abnormality (Table 1 and 2). She was started with Inj MgSO4 (Pritchard regime) as seizure prophylaxis. She was shifted to a tertiary care centre with the decision for urgent delivery.

Emergency cesarean delivery was performed under spinal anesthesia. On opening the peritoneal cavity huge amount of (1 litre+) clear ascetic fluid drained. A baby girl, was delivered weighing 1030gm. Placenta on examination revealed multiple areas of calcifications and infarcts. It was smaller in size. Placenta was sent for histopathological examination.

Fig. 1: Baby in the NICU

The immediate post operative management for the mother: MgSo4 was continued for another 24hrs and hypertension was controlled initially by parenteral (IV) labetalol and parenteral (IV) hydralazine which were gradually replaced by oral route on the 4th post partum day (BP: systolic 140-150 and diastolic 90-105mm Hg). Inj human insulin was adjusted on sliding scale as per her capillary blood glucose levels. Insulin therapy was withdrawn since the 6th day post partum.

Management of the baby: The baby cried after birth and had an Apgar score of 8/10 at birth. But gradually it deteriorated to 6/10 and 5/10 in 5 and 10 mins respectively. Baby developed grunting and intercostals recession. Neonatologist on duty shifted the baby to the Neonatal Intensive Care Unit (NICU). Baby was placed under Continued Positive Airway Pressure (CPAP) but as oxygen saturation (<80%) was not maintained even after 30 minutes, she had to be incubated and surfactant (infasurf) was given (Fig.1). After 72 hrs, baby became stable. She was extubated and she was shifted back to CPAP. After another 48 hrs, CPAP was taken off. Baby maintained oxygen saturation (98-100%) with oxygen therapy through the head box. Feeding was given initially through Nasogastric (N-G) tube with the expressed mothers' milk. On the 7th post partum day baby were able to suck breast milk. Mother and baby were discharged healthy on 11th post partum day

(Fig.2). She has been advised for follow up at 4 weeks time or earlier as needed. Same advice was given by the neonatologist for the baby.

Table 1: LABORATORY INVESTIGATIONS

PARAMETERS	16-17 weeks	28-29 weeks	30-31 weeks
Hb gm/dL	12.4	10.8	10
TLC mm3	10,800	13,400	12,000
PLT-Lacs/ mm^3	1.6	1.4	1.1
S.Cr mg/dl	1	1.2	1.6
Uric acid mg/dl	4	6	8
AST IU/L	60	90	110
ALT IU/L	40	81	92
LDH IU/L	220	435	700

- Ophthalmoscopic examination: Mild retinal edema, rest normal
- Hb A1 C: 6.3% (done at 27 weeks)

Table 2: COAGULATION PARAMETERS

Parameters	16-17 weeks	28- 29 weeks	30-31 weeks
FIBRINOGEN mg/dl	300	197.81	190
FDP mg/L	-	279.72	300
Serum Bilirubin mg/dl	1.2	2.0	2.8
URINE-protein	2 +	3+	3+
URINE-leucocyte esterase	-	+	+

Placental Pathology: wide areas of fibrinoid degenerative changes and calcifications.

Discussion

Etiological basis of preeclampsia is yet unknown. Basic pathology remains endothelial dysfunction and vasospasm.[2] This patient presented with atypical preeclampsia having all the features of early onset (<20 weeks) hypertension and proteinuria. She further developed features of imminent Hemolysis Elevated Liver Enzymes and Low Platelet count (HELLP) syndrome and huge ascites.

She developed diabetes mellitus since 16 weeks of gestation that she needed insulin for control of glycemic status. Her health deteriorated with the progress of pregnancy. Ultimately, she became refractory to commonly used antihypertensive drugs. The severity of pathology for this patient was significantly high. The associated high risk factors were: her preexisting health condition PCOS with insulin resistance and its far reaching metabolic consequences. Others were: essential hypertension with superimposed preeclampsia, pregestational diabetes mellitus, pregnancy following assisted conception and huge ascites.[3,4]

Fig. 2: Mother with the baby before discharge

HELLP Syndrome is due to microangiopathic hemolysis. Liver pathology is manifested with fibrin deposits in hepatic sinusoids, periportal hemorrhage and liver cell necrosis. Investigations done for this patient, at 30-31 weeks, revealed altered coagulation profile (Table-2), rise in liver enzymes and gradually declining platelet count (Table-1). Platelet count between 100,000 and 150,000 mm^3 is defined as class 3 HELLP syndrome.[3] Our patient belonged to this class. Controversies are there as regarding the definition, etiology and manifestations of HELLP Syndrome.[1] It is again thought that HELLP is a separate disorder from preeclampsia.[5] Majority of the patients with HELLP Syndrome is delivered early. Expectant management may be done in a select group of patients to get the benefit of corticosteroid therapy.

It has been observed that incidence of preeclampsia is relatively more common, when pregnancy occurs with some form of fertility enhancement treatment compared to those who conceive normally. However, it is not clear whether this is the consequence of the ART procedures or the innate characteristics of the woman.

Ascites is a rare complication of preeclampsia. The exact cause of ascites is not well understood. Wide spread endothelial cell dysfunction and development of capillary leak is thought to be responsible for the fluid collection in the third space (ascites). Other explanations are: reduction of intravascular oncotic pressure due to hypoalbuminemia as a result of hepatic dysfunction and proteinuria. Other concept is the development of portal circulatory system congestion and hypertension leading to transudative ascites.[6,7] This is again secondary to hepatic dysfunction. Multiorgan dysfunction is manifested by facial and/or pedal edema, pulmonary edema, pleural effusion or ascites. Our patient had more than 1L of ascitic fluid. HELLP Syndrome with large volume ascites are reported in 10% of cases.[7] It is commonly observed at 28-31 weeks of pregnancy. The paucity of reports in the literature may be due to failure of recognition of the condition clinically during USG or surgery. Presence of ascites indicates severity of the pathology. It indicates termination of pregnancy. We encourage obstetricians to be vigilant for such observation in cases with severe preeclampsia.

With the severity of maternal pathology, the fetus suffered early onset of severe fetal growth restriction. Placental perfusion was reduced, as was evidenced by Doppler studies and areas of placental calcification with infarction. Placental histology correlated with the ultrasonographic and clinical examination. MgSO4 (IV) is the drug of choice as a seizure prophylaxis to women with severe PE with or without symptoms.[8]

Poor perinatal outcome in such a case of atypical PE with HELLP Syndrome is mainly due to too early delivery (early preterm). This baby suffered the dual pathology of very low birth weight(1030 gm), combined with fetal growth restriction. Perinatal mortality in these cases are high.[1] Often there is placental abruption or infarction. These women need tertiary care centre management for both the mother and the baby. We shifted the mother with fetus in utero. Intensive neonatal care with the use of intubation and surfactant therapy, Continued Positive Pressure Ventilation (CPPV) has improved the neonatal outcome. Current evidence support early surfactant therapy in preterm infants rather than to wait for the development of signs of RDS then to go for therapy.[9] This baby was benefitted with early therapy as with the current recommendation.

The patient had been advised for follow-up keeping in mind that woman who develops atypical preeclampsia of early onset (<20 weeks) with gestational diabetes mellitus, are at higher risk to develop PE in subsequent pregnancy (25%). Risk of recurrent eclampsia is in 2% of cases. There is also the risk of developing coronary artery disease for these women in later life.[10]

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IVF Pregnancy — Rule Out Heterotopic!

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Introduction

Heterotopic pregnancy (HP) is the presence of one extra-uterine or ectopic pregnancy along with one intra-uterine implantation. Most common ectopic site is fallopian tube, more specifically ampullary part; but it could be cervix, ovary or peritoneal structure.[1]

It is rare[2] (1 in 30,000) and more following ART (1 in 3900); but a potential life threatening situation if ectopic site could not be diagnosed and intervened timely.

Here, we are presenting a case of HP following IVF-ET. Our aim is to pay attention to the growing incidence of HP, highlight the difficulties at diagnosis due to absence of specific clinical presentation, and discuss the possible outcome of the intrauterine pregnancy.

Case Report

38 year old primigravida attended our hospital emergency following referral from a private clinic with a history of diffuse abdominal pain for last one day following a sudden fainting attack. The lady had a history of primary infertility for long five years and conceived by IVF ET 25 days back.

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Fig.1 USG showing intra uterine fetus with collection in POD suggestive of haemoperitoneum

On admission, patient had severe pallor, tachycardia and hypotension; per abdominal examination revealed diffuse tenderness, muscle guarding and rigidity; per vaginal examination detected bulky uterus with fullness in pouch of douglas (POD) cervical motion tenderness was present. Transvaginal sonography (TVS) revealed solitary intrauterine pregnancy (5w1d) with embryonic cardiac activity but moderate collection in POD and left adnexal region (Fig1); right ovary was of normal size but left adnexal structures couldn't be identified within collection. Hemoperitoneum suspected; patient was posted for emergency laparotomy following resuscitation and party counselling.

On laparotomy, approximately 2.5 litres blood and blood clots removed. Uterus was found to be bulky, mobile; right sided fallopian tube and ovary were healthy; left sided ovary was healthy but left sided

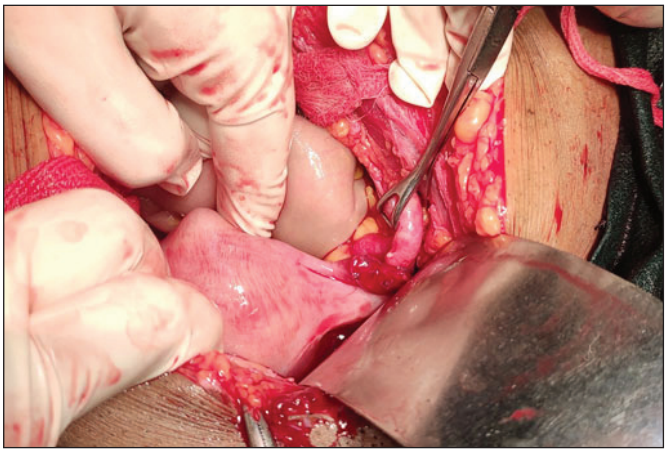

Fig.2 Intra operative picture showing site of tubal rupture

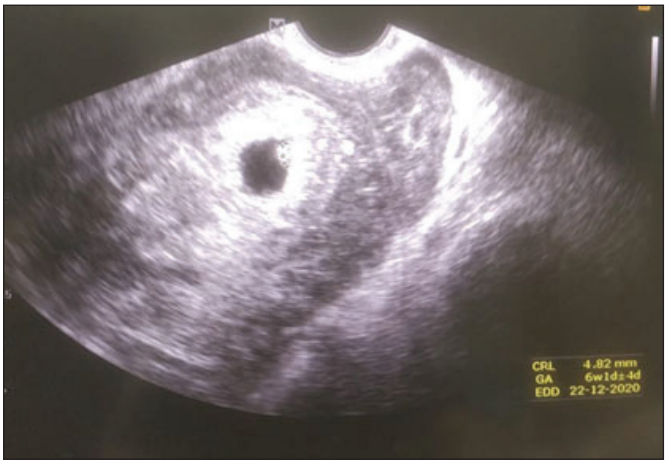

Fig.3 Follow up picture showing intra uterine fetus.

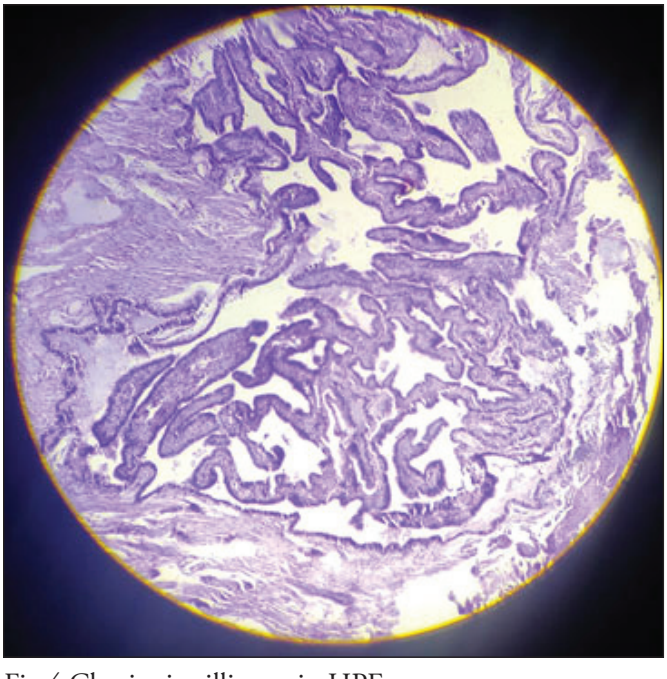

Fig.4 Chorionic villi seen in HPE.

ruptured ampullary region was noted (Fig2). Left sided total salpingectomy was done and hemostasis secured. Specimen was sent for HPE. Post-operative period was uneventful. USG was done twice on 4th and 8th postoperative day and embryonic cardiac activity noted within the intrauterine sac in both occasion (Fig3). Patient was discharged on 9th post-operative day in stable condition and kept on follow up. HPE showed fallopian tube with chorionic villi, peri tubal edema and multiple hemorrhagic spots (Fig4).

Follow-up TVS after two weeks revealed 8 weeks 4 days intra-uterine gestation with good cardiac activity. But after another one week, the lady developed off and on spotting when TVS diagnosed early pregnancy loss (EPL). Manual vacuum aspiration (MVA) was done.

Discussion

Heterotopic pregnancy was first described by Duverny in 1708 as an autopsy finding in a patient who died of ectopic pregnancy.[3] In 1972, first heterotopic pregnancy after in vitro fertilization was reported.[4] Spontaneous triplet heterotopic pregnancy has also been reported with two yolk sacs seen in one tube[5] and in another case an ectopic pregnancy in each tube with a single intrauterine gestation.[6] Heterotopic cesarean scar pregnancy has also been described in one case report.

According to available literatures, individuals usually present with four common symptoms; abdominal mass, abdominal pain, peritoneal irritation, and enlarged uterus.[3] Although in some cases there may be either features of hypovolemic shock or a complete lack of any symptoms. There are no physical exam/lab findings that are specific for heterotopic pregnancy but this diagnosis should be considered in any hypotensive pregnant patient with abdominal pain and an IUP identified on ultrasound, especially in the setting of free fluid or intra-abdominal collection on ultrasound and/or history of ART or other important risk factors like previous ectopic pregnancy, history of tubal surgery or pelvic inflammatory disease. Also most of the patient present with ambiguous symptoms like abdominal pain/cramping, dizziness, fainting attack, nausea, vomiting, vaginal bleeding; most of which are attributable to other early pregnancy complications or other medical or surgical illnesses complicating pregnancy leading to diagnostic dilemma.

There is a famous dictum by the French surgeon Henri Mondor (1885 - 1962) 'Think Ectopic'

when assessing acute abdomen of pregnant women. However, when an intrauterine gestation is seen on ultrasonography, the dictum is rarely translated into heterotrophic pregnancy. Transvaginal ultrasound is the key tool to diagnose heterotopic pregnancy. Diagnosing a heterotopic pregnancy in early week still remains challenging, this may be partially due to the confirmation of an intrauterine pregnancy often giving a sense of false security resulting in inadequate inspection of the adnexa and remaining structures during ultrasonography despite a strong initial clinical suspicion of ectopic pregnancy often leading to the misdiagnosis of the patient's abdominal pain. The only pathognomonic sign of heterotopic pregnancy in ultrasonography is the simultaneous visualisation of extra uterine and intrauterine fetal pole with cardiac motion. This occurs in only 10% of cases.

A review article in 2008 which analyzed 6 studies showed that transvaginal ultrasonography has a sensitivity of 74-84% in diagnosing ectopic pregnancy with specificity between 84-99.9%.[7] A comparative review of 192 cases of heterotopic pregnancies in 2007showed that only 1/3 of the cases was definitively diagnosed by ultrasonography pre-operatively like in this case study.[8] Approximately 70% of heterotopic pregnancies are diagnosed between 5-8 weeks, 20% are diagnosed between weeks 9 and 10, and the remaining 10% are diagnosed at or beyond the 11th week.[9] There are also reports about heterotrophic pregnancies diagnosed in 16th and 18th week.[10]

While routine pregnancy detection and follow-up by β-hCG measurement is useful in the diagnosis of ectopic pregnancy in heterotopic pregnancy, it is not much useful because of the coexisting intrauterine pregnancy which causes rising titre of β-hCG levels.

Important risk factors include tubal diseases, pelvic inflammatory disease, tubo ovarian abscess, previous ectopic, previous tubal surgery, high levels of oestradiol/progesterone, more than one ovum release as in ovulation induction and high numbers of embryo transfer as seen in IVF. Though the risk is much higher in patients with ART, several cases of spontaneous heterotopic pregnancy has also been reported.

In a case series Louis-Sylvestre et al[11] mentioned 13 cases of heterotopic pregnancy out of which only one case was a spontaneous heterotopic pregnancy, 6 with ovulation induction and 6 with IVF. The mean gestational age at the time of the diagnosis was 8 weeks and 54% heterotopic pregnancies were detected by transvaginal ultrasound. All the patients underwent surgical treatment out of which 10 had a laparoscopy and 3 had a laparotomy mainly for significant hemoperitoneum. They found laparoscopy to be useful for the early diagnosis of heterotopic pregnancy and resulted in good surgical outcomes. Our patient had also conceived with IVF-ET, presented with features of ruptured ectopic and laparotomy as needed.

Treatment for heterotopic pregnancy typically involves laparoscopy and, most often a salpingectomy or salpingostomy. However, if the patient demonstrates hemodynamic instability, a laparotomy would then be indicated after resuscitation. Due to the viable co existing intrauterine pregnancy, systemic methotrexate plays no role in the treatment of a heterotopic pregnancy. There have been some case reports of use of local injection of potassium chloride and methotrexate as well as case reports of expectant management but there seems to be a high rate of failure and there is little evidence to suggest these interventions currently.[12]

Reece et al[2] submitted for analysis 37 patients with diagnosed heterotopic pregnancy after surgical treatment of extrauterine pregnancy – 75.6% gave birth around their expected delivery date, 16.2% prematurely and 3% of pregnancies ended with a miscarriage. Our patient had abortion after 1 month.

So while dealing with a case of heterotopic pregnancy it is always important to take a concern on the viable intrauterine pregnancy, approach much be minimally invasive/intervening in order to avoid injury to the intrauterine pregnancy. With early diagnosis and treatment, 65-92% of the intrauterine pregnancies will reach viability.[2,9]

Conclusion

Suspicion of heterotrophic pregnancy should be kept in mind in patients with an adnexal mass specially during follow-up in ART patients. Obstetricians must be alert that confirming an intrauterine pregnancy clinically or by ultrasound does not exclude the coexistence of an extrauterine pregnancy. Early and timely diagnosis; and prompt management usually result in favorable and successful obstetrical outcome.

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Case Report - Gynecology

A Rare Case of Tubo-Ovarian Actinomycosis

Dr. L. Pranathi Reddy,[1] Dr. P. Kushal Priya[2]

Abstract

Actinomycotic infection of the female genital tract is rare. Actinomycosis is a chronic suppurative granulomatous infection that is characterized by formation of abscesses, multiple draining sinuses and appearance of tangled mycelial masses or granules in the discharges and tissue sections. Association of tubo-ovarian actinomycosis with the presence of a foreign body in the female genital tract has been reported sporadically in the literature, yet an increase in the incidence may be expected because of the frequent use of intrauterine contraceptive devices in recent times. It is suggested that in women presenting clinically with vague abdominal symptoms, backache and discharge, actinomycosis should be considered and ruled out with the help of cytologic and proper microbial culture methods. Once the diagnosis is established, the infection can be treated with good results with penicillin.

Introduction

Actinomycosis is a chronic suppurative granulomatous infection characterized by formation of abscesses, multiple draining sinuses and appearance of tangled mycelial masses or granules in the discharges and tissue sections. Human actinomycotic disease is described in cervicofacial, thoracic and abdominal regions where the last comprises 20% of the affliction.[6] The lesion of the genital tract is thought to have its origin from a focus in the ileocaecal segment of the intestine. Recently ascending type of actinomycotic infection involving the adnexae following insertion of intrauterine contraceptive device have been reported.[2,3,4,7,9,11] A rare case of pelvic actinomycosis presenting as tubo-ovarian mass presented here.

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Case Report

A 31-year old, P2L2A1 with two vaginal births, LCB 12 years presented to the emergency department with acute pain abdomen and vomiting for two days. Incidentally, she had failed tubectomy followed by MTP at 3 months and IUCD insertion 11 years back. USG and CECT suggested right ovarian cyst with torsion and CUT in-situ incision CA-125 was within normal limit.

She was taken for laparotomy which could not be proceeded due to dense adhesions. She was referred to higher center after closing the abdomen. In our department, subumbilical midline scar noted. Abdomen was distended.

Bimanual gynecologic examination revealed a mass through the right laterial fornix extending into POD uterus cant be made out separately. A clinical diagnosis of ? right sided adnexal mass was made. USG suggestive of large well defined mixed echogenic

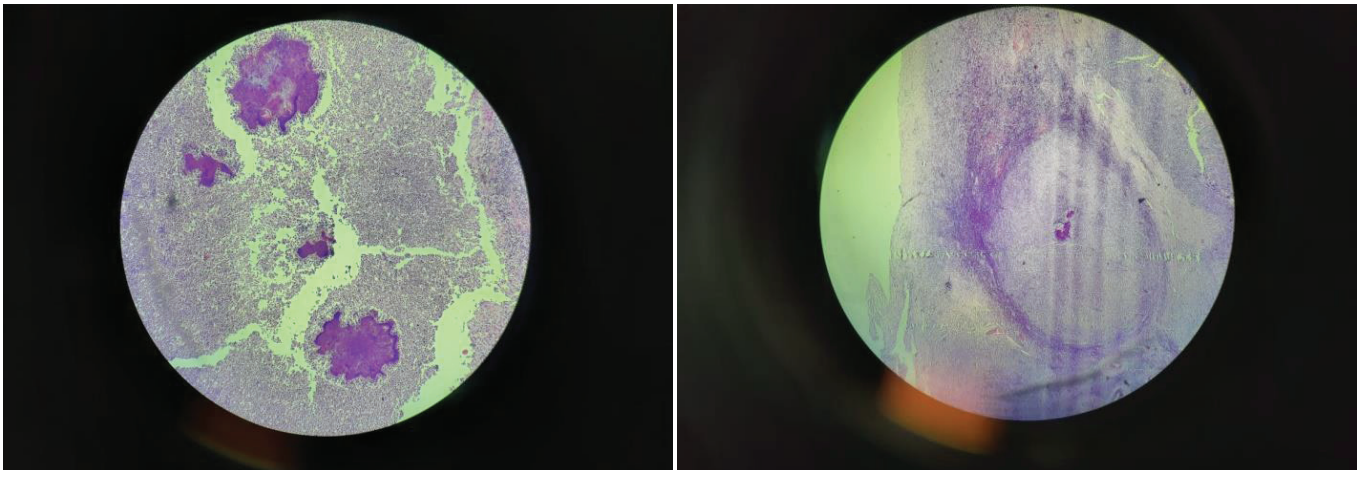

Fig.1 USG showing intra uterine fetus with collection in

mass in right adnexa extending into POD?TO mass/ abscess. CT films reviewed. An emergency exploratory laparotomy was planned

Operation notes:

Under GA, along with general surgeon abdomen opened in layers, Omentum packed, large and small bowel were plastered to each other. Anatomy was distorted. Extensive adhesions from sigmoid, rectum, small bowel noted, released. Uterus and ovaries were ill differenciated Bilateral tubo ovarian masses were seen, densely adherent to the surrounding pelvic structures and the posterior abdominal wall. On the right side, the mass was adherent to the loops of intestine; the mass gave way spilling purulent material into the peritoneal cavity during adhesiolysis white cheesy material sucked out. The vermiform appendix was not traceable. Left salpingo oophorectomy done with excision of cyst wall (?dermoid). Right ovary and tube were adherent to rectum unable to separate, Possible adhesions separted. pelvic drains kept, wash given Haemostasis secured. Abdomen closed in layers. Cu T removed. The purulent material was examined for culture and antibiotic sensitivity and was found to be sterile after three days of incubation. 1 unit packed transfusion was given. She was managed in ICU during post operative period. Patient had cough postoperatively, managed conservatively with pulmonologist advice. Dressing done on POD3 wound appeared healthy.

Pathologic examination

Sections from the ovarian tissue showed stroma extensively infiltrated by lymphocytes and plasma cells with colonies of actinomyces-characterised by clumps of basophilic filamentous bacteria in a rosette like configuration with esionophilic clubs at the periphery (Splendore-Hoepple phenomena). The colonies are surrounded by dense neutrophilic infiltrate. The inflammatory reaction is accompanied with dense areas of fibrosis. A focus of luteal cyst noted in section. Sections from tube shows dilated lumen and congested serosa, features suggestive of Actinomycosis of tubo – ovarian mass. (Fig.1)

On 9th POD there was gaping in mid part of rectus sheath with features of burst abdomen, She underwent Relaparatomy under GA:

Operative findings:

Bowel herniation in rectus sheath noted. Adhesions between bowels noted separated. Drain kept. dead tissue removed.debridement done.wash was given. Abdomen closed with tension sutures. The patient was treated with higher antibiotics and Inj ceftrioxone IV x 6 weeks postoperatively. Wound healed well, delayed suture removal done. She was treated with T amoxiclav 625mg twice daily x 6weeks.

Discussion

Female genitalia is relatively a rare site for pelvic actinomycosis.[2,6] Pelvic actinomycosis is often unsuspected clinically as actinomyces do not inhabit the vaginal canal. Adnexal involvement is usually secondary to infection in the gastrointestinal canal. In this case, the infection was of ascending nature because of the presence of a IUD for 11 years acting as a foreign body causing tissue damage in the uterine cavity and

the endocervical canal. Actinomycotic infections are endogenous in origin. Organism normally present is of low pathogenicity and multiplies in a favourable environment provided by the injured necrotic tissue. Association of actinomycosis to a foreign body like fishbone in the large intestine is reported.[5] With increasing popularity of I.U.C.D., actinomycotic infection is on an increase. Likewise, long forgotten tampons and pessaries may also be associated with pelvic actinomycosis in women. Actinomyces israelli is reported to be associated with I.U.C.D.[1,2,3,4,7,9]

In conclusion, we suggest that in women presenting clinically with vague abdominal symptoms, backache and vaginal discharge, actinomycosis should be considered and ruled out with the help of cytologic and proper, microbial culture methods. Once the diagnosis is established, the infection can be treated with good results with pencillin.[5,8,10] It is also important to look for other sites for actinomycosis, in the absence of which the possibility of existence of foreign bodies in the genital tract should be considered.

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OBITUARY

Dr Shanti H K Singh

(1947-2021)

The news of the untimely death of Dr Shanti H K Singh on 9th January 2021 filled us with immense sorrow. We lost a precious jewel in the crown of ISOPARB who served the organization as Vice President and Founder President Patna Chapter.

She was a great teacher who had both passion and obsession for teaching, had a great fan following because of her interactive clinical teaching. She was an astute clinician and surgeon par excellence. She was frank and fearless and loved to take challenges. Above all she was a great human being.

She was born on 8th January 1947 in Village Pipariya of Kaimur District Bihar. She completed her higher secondary from Bankipur Girls High School in 1963 and joined as Premedical student in Prince of Wales Medical College, Patna from where she completed MBBS in 1969. After obtaining MS in Obsterics and Gynecology from Patna Medical College, she joined the institution as RSO and served as teaching faculty till 2005, when she retired as Associate Professor. During her tenure at Patna Medical College she established Centre of Excellence for tubal recanalization. She was an accomplished laparoscopic surgeon and performed record number of laparoscopic sterilizations in rural camps.

She was an active member of Patna Obstetric and Gynaecological Society and held the position of Secretary and President. She was the President of Association of Gynaecologists and Obstetricians of Bihar & Jharkhand (2019-2020), G C member of SOVSI Bihar & Jharkhand and active member of Patna Menopause Society. She was conferred Life time achievement award by POGS in 2018.

She was a caring wife to her husband Dr H K Singh, loving mother to her son Dr Arun Kumar, Mr Arvind Kumar and daughter Mrs Anamika and affectionate mother in law to Dr Sushma, Mrs Rashmi and Mr Mukesh and doting grandmother to her grandchildren.

We shall always miss you and forever your memories will remain in our hearts.

Rest in Peace! OM Shanti!

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[4] World Health Organization. WHO Recommended Surveillance Standards, Second Edition [WHO website). 1999. http://www.who.int/csr/resources/publications/surveillance/whocdscsrisr992.pdf.

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