Indian Journal of Obstetrics and Gynecology

(A PEER-REVIEWED AND REFEREED JOURNAL)

VOLUME 12 NUMBER 1 JANUARY - MARCH 2024

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January – March 2024
Volume 12 Number 1

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Editorial

Indian Journal of Obstetrics and Gynecology
Volume 12 Number 1, January – March 2024
DOI: http://dx.doi.org/10.21088/ijog.2321.1636.12124.1

Gestational Trophoblastic Disease: Know the unbeknown

Prof. Nutan Agarwal

Gestational Trophoblastic Disease (GTD) is an unique disorder of fetal tumour in maternal tissue. Diagnosis of this wide spectrum condition is frequently delayed due to its unusual presentations. We usually follow all old described criteria's, here are some of my observations based on my clinical based experience which can be considered in future now.

One has to be more vigilant to diagnose partial mole. Ruling out of partial mole should be essential in certain cases, specially diagnosed as missed abortions. One should suspect partial mole in following situations:

1. If patient is having persistent nausea or vomiting even in failed early pregnancy.
2. There are increasing βhCG levels despite USG showing missed abortion.
3. Proper USG should be done in all cases of missed abortion.
4. Histopathology should be obtained in all cases of missed abortions So that required βhCG follow up can be performed for timely diagnosis of Gestational trophoblastic neoplasia.
5. If Medical methods are used for termination, patient can be guided to be vigilant for expulsion of products and collect them in saline bottle which can be provided before, where microarray can be tested on these products.

Points to ponder: More than 60 cases of GTD were observed where I found 8 cases of partial mole out of 8, 1 developed locally invasive disease and 2 Metastatic. Hence I reached on following conclusion.

1. Partial mole incidence may be more than reported. One has to be more vigilant to diagnose.
   - Any missed abortion, if nausea vomiting, suspect this condition.
   - Always do βhCG levels in missed abortion.
   - Always get histopathology of these cases.
2. Partial mole may cause more metastatic disease than reported as they are likely to be missed and later cases of metastatic GTD may be falsely anticipated following antecedent abortion.
3. Partial mole also should be evaluated thoroughly and followed up properly with βhCG levels, it should not be underestimated.
4. Large multicentre trials are required to establish the facts about partial mole.

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Indian Journal of Obstetrics and Gynecology
Volume 12 Number 1, January – March 2024
DOI: http://dx.doi.org/10.21088/ijog.2321.1636.12124.2

Severe Acute Maternal Morbidity: An indicator of Obstetric Care

Mamatha K[1], Sushmitha S.C[2]

How to cite this article:

Mamatha K, Sushmitha. S.C. Severe Acute Maternal Morbidity: An Indicator of Obstetric Care. Indian J Obstet Gynecol. 2024;12(1): 09-15.

Abstract

Introduction: Severe Acute Maternal Morbidity (SAMM) is a tool which is more advantageous compared to maternal mortality as an indicator of obstetric care. The global MMR shows a reduction from 342 to 211 death per 1 lakh live birth from 2007 to 2017 with a 38% over 10 years. Under Millennium development goals (MDG)-5, goal was to reduce maternal mortality by 75% between 1990-2015. By the end of year 2020 MMR in India was 97 per lakh. Now the Sustainable development goal (SDG) is to reach MMR below 70 by 2030.

Aims and Objectives:

* To as certain the incidence of maternal near-miss indices
* To as certain the reasons behind maternal mortality
* To as certain the occurrences of near-miss instance

Materials and Methods: A retrospective study was conducted at Cheluvamba hospital, Mysore, Karnataka, India during January 2022 to December 2022. Maternal fatalities and near miss incidents are included in the study population. Case definitions were made using the 2009 WHO criteria. Diagnoses of life-threatening illnesses were made, and cases that satisfied WHO 2009 criteria were chosen. Analyses of maternal mortality from the same time frame were also conducted. Anemia and other medical conditions were viewed as secondary causes leading to the mother's near-miss and death, while hemorrhage, hypertension, sepsis, and other conditions were classified as primary causes for patients based on their final diagnosis.

Results: In our Institute, 8632 deliveries took place. In this study, the MMR was 251/100,000 live births, while the MNMIR (Maternal Near Miss Incidence Ratio) was 14/1000 live births. The ratio of MNM to MM was 5.7:1. The MI (total mortality) was 14.8%. The ratio of severe maternal outcomes to live births, or SMOR, was 16.8/1000. Hypertensive disorder (42.85%) was the leading cause of maternal mortality, with antepartum eclampsia being the main leading cause in our setup, followed by hemorrhage (19.04%). Among the near miss events, hypertensive disorder was the leading cause with 49.16%, followed by hemorrhage (31.66%), severe anemia, and abortion, which account for approximately 7.5%.

Conclusion: Maternal morbidity and mortality can be decreased by recognizing the risk factors, identifying high-risk cases, promptly referring them, and stabilizing the referral system.

Keywords: SAMM; Maternal health, Maternal near miss; MMR.

Author's Affiliation: [1]Professor, [2]Senior Resident, Department of Obstetrics and Gynecology, Cheluvambha Hospital, Mysore Medical College and Research Institute, Mysore, Karnataka 570001, India.

Corresponding Author: Mamatha K, Professor, Department of Obstetrics and Gynecology, Cheluvambha Hospital, Mysore Medical College and Research Institute, Mysore, Karnataka 570001, India.

E-mail: Sushmithacvs@gmail.com

Received on: 08.01.2024 **Accepted on:** 12.03.2024

INTRODUCTION

Maternal mortality is a critical indicator to assess the quality of services provided by a health care system. Reducing Maternal mortality and improving existing health care is a prime concern both for the country and worldwide. The global MMR maternal death reduced from 342 to 211 death per I lakh live birth from 2007 to 2017 with reduction of 38% over 10 years[2]. Under Millennium development goals (MDG)-5, goal was reducing maternal mortality by 75% between 1990-2015.[3] Maternal death in India is reduced from 556 per 1 lakh live birth in 1990 to 130 per 1 lakh live birth in 2016. By the end of the 2020 MMR is 97 per lakh (sample registrations system November 2022).[1] As per united nations Sustainable development goal (SDG) target of MMR is below 70 by 2030.[1]

Maternal mortality and Maternal near miss are important indicators of maternal health. Maternal mortality, is often described as "the tip of the iceberg", and maternal morbidity as the base.[4] That is for each maternal death, there are several women who experienced a severe complication, nearly died but survived (near miss).

The goal number five was to improve the maternal health in pregnant women's health status and is not reflected by mortality indicators. Hence the concept of severe acute maternal morbidity (SAMM)[6,7] is superior over maternal death in drawing attention to surviving women's reproductive health and lives and is equally applicable in developing countries as well as developed countries.

In many developed countries, maternal mortality has fallen to single digits whereas near miss cases are more and hence useful in evaluation of the present system. Till recently there were no criteria set for identification of these cases for routine implementation, and wider application of this concept was limited.

In 2009, WHO has come up with clinical, laboratory, and management criteria for the identification of these near miss cases. Maternal near miss case is defined as "a woman who nearly died but survived a complication that occurred during pregnancy, childbirth, or within 42 days of termination of pregnancy".[5]

Need for the study

The frequency of the maternal near miss to death ratio, mortality index, and MNM incidence ratio were the main objectives of our study. Analyzing the causes of near-miss incidents and contrasting them with maternal mortality was our goal. In a single year, we have tracked the pattern of maternal fatalities and near-miss incidents.

AIMS AND OBJECTIVES

* To as certain the incidence of maternal near miss indices.
* To as certain the reasons behind maternal mortality.
* To as certain the occurrences of near-miss instance.

METHODS

A retrospective study was conducted at Cheluvamba hospital, Mysore, Karnataka, India during January 2022 to December 2022. Maternal fatalities and near-miss incidents are included in the study population. Case definitions were made using the 2009 WHO criteria.

Diagnoses of life-threatening illnesses were made, and cases that satisfied WHO 2009 criteria were chosen. Analyses of maternal mortality from the same time frame were also conducted.

Anemia and other medical conditions were viewed as secondary causes leading to the mother's near-miss and death, while hemorrhage, hypertension, sepsis, and other conditions were classified as primary causes for patients based on their final diagnosis.

Following indices were calculated:

1. Women with Life-threatening Conditions (WLTC) refers to the sum of maternal near-miss and maternal deaths (WLTC=MNM+MD).
2. Severe Maternal Outcome Ratio (sMOR) refers to the number of women with life-threatening conditions (MNM+MD) per 1000 live births (LB). {SMOR=(MNM+MD)/LB}.
3. MNM Ratio (MNMR) refers to the number of maternal near miss cases per 1000 live births (MNMR=MNM/LB).
4. Maternal Near-Miss Mortality Ratio (MNM: MD) refers to the ratio between MNM cases and Maternal Deaths (MD).
5. Mortality Index (MI) refers to the number of maternal deaths divided by the number of women with life-threatening conditions expressed as a percentage [MI=MD/(MNM+MD)].

RESULTS

This is a retrospective study done in department of Obstetrics and Gynecology in Cheluvmaba hospital, Mysore. The study was done during a period from 1st January 2022 to 31st December 2022. During this period 12080 ANC cases were admitted, of which 5279 patients were delivered vaginally, 3353 patients required lower segment caesarean section (LSCS). 120 cases were diagnosed as near miss and 21 maternal deaths during the study period.

Table 2 reveals that whereas 52.3% of maternal deaths and 47.5% of near-miss cases were discovered in the 25–31 age range, respectively.

Primipara are more likely to die and have morbidity. In incidents of maternal death and near misses, the majority of patients were in the third trimester. The majority of cases were referred by people living in rural areas.

The most common medical condition in cases of near misses (7.5%) and maternal deaths (9.52%) in this investigation was very severe anemia.

Table 1: Near miss indices

Indices	Results
Total no. of deliveries	8632
Total no. of live births (LB)	8347
Number of near miss cases (MNM)	120
Number of maternal mortality cases (MM)	21
Maternal near miss incidence ratio (MNM IR=MNM/LB)	14/1000 live birth (1.43%)
Maternal mortality ratio (MMR=MM/LB)	251/100000 live birth
Maternal near miss: Maternal mortality ratio (MNM: MD)	5.7:1
Mortality index (MD/MNM+MD)	14.8%
Severe maternal outcome ratio (SMOR=MNM+MD/LB)	16.8/1000 live birth (1.68%)

The incidence ratio of maternal near misses is 14 per 1000 live births. The ratio of maternal near misses to deaths is 5.7: 1. 14.8% is the mortality index.

Table 2: Patient characteristics

Characteristics	Near Miss Cases N-120	Percentage %	Maternal Death N-21	Percentage %
Age				
18-24 Years	55	45.8	8	38.1
25-31 Years	57	47.5	11	52.3
32-38 Years	8	6.6	2	9.5
Parity				
Primipara	74	61.7	13	61.9
Multipara	46	38.3	8	38.1
Gestational Age				
Upto 12 Weeks	9	7.5	1	4.7
13-28 Weeks	6	5	1	4.7
28-36 Weeks	58	48.3	7	33.3
Term	37	30.8	8	38.1
Postnatal	10	8.3	4	19.04
Referral				
Self	49	40.83	7	33.33
Outside	71	59.16	14	66.66

Table 3: Causes for near miss case and maternal deaths

Causes	Maternal Near Miss Case N-120	Percentage %	Maternal Death N-21	Percentage %	Moratality Index %
Hemorrhage	38	31.66%	4	19.04%	9.52
APH	10	26.31	1	25	
PPH	27	71.05	3	75	
Ruptured Uterus	1	2.63	0	0	
Hypertensive Disorder	59	49.16%	9	42.85%	13.23
Severe PE	26	44.06	2	22.22	
Antepartum Eclampsia	25	42.37	3	33.33	
Postpartum Eclampsia	5	8.47	2	22.22	
Hellp Syndrome	3	5.08	2	22.22	
Abortion	9	7.50%	1	4.76%	10
Septic Abortion	2	22.22	0	0	
Abortion In Shock	3	33.33	0	0	
Ruptured Ectopic	4	44.44	1	100	
Severe Anemia	9	7.50%	1	4.76%	10
Others	2	1.60%	3	14.28%	60
Cardiac Case	3	2.50%	0	0	0
Liver Disorder	0	0	2	9.52%	100
AFLP	0	0	1	50	
Wilson Disease	0	0	1	50	
Pulmonary Embolism	0	0	1	4.76%	100

Hypertensive condition accounted for 49.16% of the near-miss occurrences, with hemorrhage coming in second at 31.66%. Severe anemia and abortion accounted for approximately 7.5% of the incidents. In our setup, antepartum eclampsia is the primary cause of maternal mortality, followed by hemorrhage (19.04%), whereas hypertensive disease (42.85%) was the major cause of maternal mortality.

The mortality index was high in our configuration; the largest percentages were seen in cases of liver disease and pulmonary embolism (100%) and DKI, metastatic liver disease owing to ovarian cancer, bronchopneumonia, and epilepsy with metabolic acidosis.

Table 4: Intevention

Intervention	Number of near miss cases
ICU admission	70
Use of cardiotonics/vasopressors	18
Mechanical ventilation	15
NIV	10
Laparotomy including Hysterectomy	3
Dialysis	8
Management of ketoacidosis	2
Drugs to reduce cerebral oedema (mannitol)	15
Blood transfusions	50
Balloon tamponade	19

Over 50% of the patients needed to be admitted to the intensive care unit, and 15% of them needed ventilator support. Patients are often extubated on day two. NIV was needed for ten patients. About fifty patients received several PRBC, platelets, and FFB transfusions.

DISCUSSION

An indicator of the caliber of maternal care is obstetric fatalities. A few years ago, near miss criteria gained popularity since they were not consistent. The 2009 WHO criteria[8] are distinct in that they take into account laboratory and management based factors in addition to clinical criteria. As a result, it takes into account both Waterston's[10] and Mantel's[9] criterion. The other indices pick up the near miss case if one criterion misses it, lowering the likelihood of missing the case.

The SAMM study conducted in Brazil solely examined ICU settings, but our analysis encompassed ICU and high dependency units, thereby representing all cases of near misses. The findings of our study were similar to those of other developing nations, but the WHO criteria were nottaken into account in these studies.[11]

This study's maternal near miss incidence ratio (MNMR) of 14% is similar to that of Roopa PS et al.'s[12] study from 2012, which found that the MNMR was 14.34/1000 live births. Research indicates a comparable pattern, with variations ranging from 15–40 per 1000 live births in underdeveloped nations.[13-16] Numerous criteria have been included in the studies to identify the cases of near misses. Using the Mantel's and Waterson's criteria, a cross-sectional study conducted in Brazil revealed a variable rate of 86 and 62, respectively.[16]

In our setting, there were 251 maternal deaths for every 100,000 live births. A similar death rate of 260/100000 live newborns was seen in the Brazilian study.[15] The maternal mortality ratios in other emerging nations were 423/100000 live births and 324/100000 live births[17,18], respectively. Hypertensive disorder was the primary cause (42.85%). The majority of the maternal death group patients arrived at our hospital in a fatal condition and passed away in ten to twelve hours.

There was one maternal fatality for every five to six life-threatening diseases, or a near miss to mortality ratio of 5.7: 1. Better care is indicated by higher ratios. A 5.6:1 ratio in Roopa PS et al.[12] supports our findings. A study conducted in Nepal found a ratio of 7.2:1,[17,18] whereas a study conducted in Syria found a ratio of 60:1. The range of 1: 5–12[16] in African countries is comparable to this ratio. According to their research, the ratio is 117–223: 1.[14] Over time, an increase in this percentage indicates progress made in improving obstetric care. Therefore, yearly estimations rather than one-time estimates might aid in increasing the quality of care given.

Hypertensive disorder (49.16%), hemorrhage (31.66%), severe anemia and abortion (7.5%), cardiac cases (2.5%), and DKI (1.6%) are the most common conditions causing maternal near misses. In our investigation, 21 deaths were noted in total. According to Upadhyaya and Chaudhary, Moracs et al., and Huseyin et al., hypertensive disorders during pregnancy are the primary cause of sickness in mother.[19-21]

In our study had incidence of severe preeclampsia in 21.6%, Eclampsia 24.9%, HELLP syndrome 2.5% and in Study by Souza JP *et al*[22], had incidence of severe pre-eclampsia in 36.3%, Eclampsia 9.7%, HELLP syndrome 5.6%. severe hemorrhage 10.5%, severe sepsis 6.4%.

Our study's mortality index is 14.8%. The majority of the cases submitted to our tertiary referral facility, which serves neighboring regions in and around Mysore, are already in a moribund state. Delays in referrals are a primary cause of illness and mortality among mothers. The creation of tertiary care facilities in each district can reduce this. The study's maternal near misses and deaths may have resulted from insufficient resource utilization, tardy diagnosis making, and delayed transfer to a tertiary center. Improving health awareness and providing health education can also have a significant impact on the quality of obstetric critical care. The high mortality index in our Centre is due to poor antenatal care, delayed referrals, poor transport facilities and lack of knowledge.

One of the main goals of the National Health Mission (NHM) is to lower maternal and newborn morbidity and mortality in order to help India meet the Sustainable Development Goal of having an MMR of fewer than 70 per lakh live births.

With the goal of encouraging institutional delivery, the Janani Suraksha Yojana (JSY) was launched, offering financial incentives. The PMSMA program has been initiated in order to achieve a significant reduction in maternal morbidity, maternal motility, and neonatal morbidity. Pre-eclampsia, eclampsia, hemorrhage, severe anemia, and other high-risk and susceptible cases are more likely to be delivered in an institutional

setting.

All Medical College Hospitals, District Hospitals, First Referral Units (FRU), and Community Health Centers (CHCs) are implementing the LaQshaya program. All expectant mothers and newborns who give birth in public health facilities will benefit from it. Under the LaQshya program, obstetric HDUs at district hospitals and specialized obstetric ICUs at medical colleges hospitals are operationalized to improve critical care in obstetrics.

CONCLUSION

Maternal fatalities and near-miss incidents share similarities that can be used to illustrate the challenges faced following the commencement of an acute complication.Through early referral or thorough monitoring, the SAMM criteria can be used to reduce maternal mortality and morbidity during obstetric treatment. The introduction of government programs like LaQshya, PMSMA, SUMANA, and other initiatives to strengthen the referral units can reduce maternal morbidity and death by enhancing antenatal care, identifying high risk cases, early referral, and strengthening the referral unit.

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STATEMENT ABOUT OWNERSHIP AND OTHER PARTICULARS

"Indian Journal of Obstetrics and Gynecology" (See Rule 8)

1.	Place of Publication	:	Delhi
2.	Periodicity of Publication	:	Quarterly
3.	Printer's Name	:	**Dinesh Kumar Kashyap**
	Nationality	:	Indian
	Address	:	3/259, Trilokpuri, Delhi-91
4.	Publisher's Name	:	**Dinesh Kumar Kashyap**
	Nationality	:	Indian
	Address	:	3/259, Trilokpuri, Delhi-91
5	Editor's Name	:	**Dinesh Kumar Kashyap**
	Nationality	:	Indian
	Address	:	3/259, Trilokpuri, Delhi-91
6.	Name & Address of Individuals	:	**Red Flower Publication Pvt. Ltd.**
	who own the newspaper and particulars of	:	41/48, DSIDC, Pocket-II
	shareholders holding more than one per cent of the total capital		Mayur Vihar, Phase-1, Delhi-91

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Sd/-

(Dinesh Kumar Kashyap)

Original Article

Indian Journal of Obstetrics and Gynecology
Volume 12 Number 1, January – March 2024
DOI: http://dx.doi.org/10.21088/ijog.2321.1636.12124.3

A Prospective Observational Study of Patient Related Outcome of Post Hysterectomized Females

Anisha Singh[1], Sakshi Nakade[2], Salil Barsode[3], Vaishali Taralekar[4], Sumedha Rawal[5], Nagashree Nagraju[6]

How to cite this article:
Anisha Singh, Sakshi Nakade, Salil Barsode, *et al*. A Prospective Observational Study of Patient Related Outcome of Post Hysterectomized Females. Indian J Obstet Gynecol. 2024;12(1):17-20.

Abstract

Background: Women who had undergone hysterectomy have to overcome problems related to physical, social and emotional well being. As the hysterectomy is one of the most common surgeries, a study was conducted to answer the question for the optimal surgical recovery. This study aims to describe the relationships between recovery time and the components of quality of life after hysterectomy.

Aims and Objectives: To study the physical, social, and emotional well being of post hysterectomised patient.

Methodology: Study was conducted in Department of Obstetrics and Gynaecology at Bharati hospital, Pune. It was a prospective observational study of patient related outcomes to study the physical, social, and emotional well being of post hysterectomised patient.

Post hysterectomized women above 40 years were included in this study.

196 post hysterectomised women were included. Study was conducted from October 2021 to January 2024.

***Results*:** From third month onwards, degree of difficulty of majority of patients was reduced in all mentioned activities. Majority of cases there was gradual health improvement noted. The pain score was reduced over 3 months in 92% cases and in almost all patients over 6 months.

Conclusion: It is important to assess quality of life after any surgery, so timely intervention such as physiotherapy, counselling, psychotherapy and medical therapy can aid in improvement of both physical and emotional health for betterment of patient care.

Keywords: Post Hysterectomy; Quality of life.

Author's Affiliation: [1]Senior resident, [2,6]Junior Resident, [3,4]Professor, [5]Assitant Professor, Department of Obstetrics and Gynecology, Bharati Vidyapeeth (Deemed to be University) Medical College, Pune 411038, Maharashtra, India.

Corresponding Author: Sakshi Nakade, [2]Junior Resident, Department of obstetrics and Gynecology, Bharati Vidyapeeth (Deemed to be University) Medical College, Pune 411038, Maharashtra, India.

E-mail: synakade1018@gmail.com

Received on: 06.03.2023

Accepted on: 28.03.2023

INTRODUCTION

Hysterectomy, removal of the uterus, is a common surgical procedure used to treat gynaecological morbidities such as fibroids, cysts, and uterine prolapse in women typically close to or after menopause.

Although it is not the only way of overcoming problems in the reproductive organs, it is the best strategy to deal with many diseases permanently.[3,4] The uterus is a very critical reproductive organ, especially for married women. Hysterectomy has several impacts on women, affecting the quality of

life.[7-9] This is effects include physical, psychological, environmental and social relations.[10,11] Social relationships refer to the interactions between different individuals and how it affects them. It includes personal relationships, social support and sexual activity.[12,13] In the personal relations post-hysterectomy women experience changes as they adapt to the environment, such as eating and drinking, obeying regulations, building a shared commitment in a group or community, personal beliefs about strength when facing difficulties and even confidence in themselves.[14,15] Some post-hysterectomy women receive social support from friends and family.[16]

Different length of recovery time period may affect quality of life after hysterectomy. Adequate help and support from friends, family and health care professionals, could improve their quality of life after surgery.

MATERIALS AND METHODS

Study was conducted in Department of Obstetrics and Gynaecology at Bharati hospital, Pune**.** It was a prospective observational study

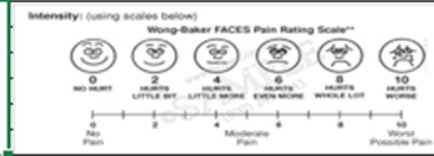
To study the physical, social, and emotional well being of post hysterectomised patient.

Post hysterectomized women above 40 years were included in this study.

196 post hysterectomised women were included. Study was conducted from October 2021 to February 2024.

DEPARTMENT OF OBSTETRICS & GYNECOLOGY

PATIENT REPORTED OUTCOME MEASURES FORM - HYSTERECTOMY

SR.	POINT	SUB POINT	1st visit	after 3 month	after 6 month	after 12
1	For each of the following activities, please indicate the degree of difficulty you have experienced in last week – after your surgery (kindly tick)	1. Rising from bed	3	2	1	0
		2. Putting on clothes	4	2	1	0
		3. Standing from sitting	4	2	1	1
		4. Bending to floor	4	2	1	1
		5. Squatting	4	2	1	1
2	In general, would you say your h	1. Excellent				√
		· Very Good			√	
		· Good		√		
		· Fair	√			
3	On a scale of 0-10 with 0 being no pain at all and 10 being worst pain imaginable , please indicate your average pain		8	5	0	0
4	The following items are about activities you might do during a typical day . Does your health now limit you in these activities? (from 3rd month onwards)	1. **Moderate activities such as washing c**				
		a. Yes, limited a lot				
		b. Yes , limited a little		√		
		c. No, Not limited			√	√
		2. **Climbing several flights of stairs.**				
		a. Yes, limited a lot				
		b. Yes, limited a little		√		
		c. No, Not limited at all			√	√
5	Are you experiencing postmenopausal symptoms like hot flushes, irritability, depression or any other after	• Yes	√			
		• No		√	√	√
6	If yes, how much is it affecting your day to day activities?	• To limited extent	√			
		• A lot				
		• Not at all			√	√
7	Do you feel there is a need to seek treatment for complaints mentioned above?	• Yes	√			
		• No			√	√
8	orgnas is removed is disturbing you psychologically or physically?	• Yes				
		• No	√		√	√
9	Has surgery affected your sexua	• Yes				
		• No	√		√	√

Following tables and questionnaire were used for the same:

Inclusion Criteria:

196 post hysterectomised women beyond 40 yrs of age were included

Exclusion Criteria:

Women of age less than 40 years.

Tools of data collection: Data was collected by interviewing the participants in detail. Detailed history in respect to menstrual cycles, abnormal uterine bleeding, level of activity after hysterectomy was ascertained and correlated clinically and above table of questionnaire was used for interviewing the patients

OBSERVATIONS AND RESULTS

It is a prospective observational study was conducted in Bharati hospital.

All post hysterectomized (TAH and TLH) women were meticulously observed and Hence their physical and mental well being was studied.

Following tables and questionnaire were used for the same.

Q1 For each of the following activities, please indicate the degree of difficulty you have experienced.

Table 1: Rising from bed

	Freq (%)	Last week	After 3 months	After 6 months	After 12 months
Scores	1	-	13 (6.6%)	75 (38.3%)	64 (32.7%)
	2	-	102 (52%)	10 (6.1%)	3 (1.5%)
	3	22 (11.2%)	70 (35.7%)	2 (1%)	-
	4	174 (88.8%)	-	-	-
	Total	-	185 (94.4%)	87 (44.4%)	67 (34.2%)

Table 2: In general health

	Freq (%)	Last week	After 3 months	After 6 months	After 12 months
Scores	Fair	57 (29.1%)	8 (4.1%)	8 (4.1%)	-
	Good	136 (69.4%)	68 (34.7%)	3 (1.5%)	-
	Very good	2 (1%)	9 (4.6%)	12 (6.1%)	-
	Excellent	-	-	55 (28.1%)	63
	Total	195	85 (43.4%)	78 (39.8%)	196

Table 3: Average pain

	Freq (%)	Last week	After 3 months	After 6 months	After 12 months
Scores	Fair	57 (29.1%)	8 (4.1%)	8 (4.1%)	
	Good	136 (69.4%)	68 (34.7%)	3 (1.5%)	
	Very good	2 (1%)	9 (4.6%)	12 (6.1%)	
	Excellent			55 (28.1%)	63
	Total	195	85 (43.4%)	78 (39.8%)	196

Table 4: Moderate Activity

	Freq (%)	Last week	After 3 months	After 6 months	After 12 months
Scores	Yes	175 (89.3%)	21 (10.7%)	8 (4.1%)	-
	No	21 (10.7)	175	3 (1.5%)	-
	Total	**196**	85 (43.4%)	78 (39.8%)	196

Table 5: the fact that obe of your body organs is removed is disturbing you

	Freq (%)	Last week	After 3 months	After 6 month	After 12 months
Scores	Yes	16 (8.2%)	-	-	-
	No	180 (91.8)	63 (32.1)	66 (33.7)	-
	Total	196	85 (43.4%)	78 (39.8%)	196

DISCUSSION

Absolutely, assessing quality of life after surgery is crucial for understanding the holistic impact of the intervention on patients' physical, emotional, and social well-being. Physiotherapy plays a vital role in post-surgical rehabilitation by addressing physical limitations, promoting recovery, and improving overall quality of life.

Physiotherapy interventions can include exercises to regain strength, flexibility, and range of motion, as well as techniques to manage pain and reduce swelling. Moreover, physiotherapists often provide education on proper body mechanics and strategies for activities of daily living, which can enhance independence and functional ability.

In addition to its physical benefits, physiotherapy can also have positive effects on emotional health by boosting confidence, reducing anxiety, and promoting a sense of well-being through increased physical activity and social interaction.

By integrating physiotherapy into post-surgical care, healthcare providers can optimize patients' recovery and help them achieve the best possible outcomes in terms of both physical function and overall quality of life.

SUMMARY AND CONCLUSION

Post hysterectomized women should be monitored post-operatively for physical, mental, social well being, if any complications and complaints should be addressed and timely intervention should be done. this can further enhance the lifestyle and well being of post hysterectomized patients.

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Original Article

Indian Journal of Obstetrics and Gynecology
Volume 12 Number 1, January – March 2024
DOI: http://dx.doi.org/10.21088/ijog.2321.1636.12124.4

A Study of Pregnancy Outcome in Various High Risk Pregnancies

Kiran Oswal[1], Uma Mahesh Sindoor[2]

How to cite this article:
Kiran Oswal, Uma Mahesh Sindoor. A Study of Pregnancy Outcome in Various High Risk Pregnancies. Indian J Obstet Gynecol. 2024;12(1):23-25.

Abstract

Background: A High risk pregnancy is identified as pregnancy in which there is a risk of adverse outcome in the mother and / or baby that is greater than the incidence of that outcome in general population. All pregnancies are at risk even though most of the pregnancies and childbirth worldwide are uneventful. Almost 15% of all the pregnant women can develop potentially life-threatening complications which might require skilled care with some requiring major intervention for survival.

Methods: This prospectivestudy was carried out in 220 cases being brought in OBG dept of AL Ameen Medical College, Bijapur, from July 2023 to December 2023. A detailed data of sociodemographic profile, general examination and obstetric examination were carried out.

Results: Of the 220 antenatal cases studied, 99 cases (45%) of them had pre-eclampsia. Malpresentation pregnancies contributed to about 36% of cases and Anemia were seen in 13 cases (6%). The mode of delivery was caesarean section in 70 cases (31.2%). Normal vaginal delivery were done in 94 cases (42.8%). Instrumental deliveries were seen in 11 cases (5%).

Conclusion: *High risk pregnancy, Caesarian section, Normal vaginal delivery* of active phase of labour by making cervical dilatation faster and lowering the duration of usage of labour analgesics, which makes labour a pleasant experience for woman.

Keywords: Entonox; Labour analgesia; Cervical dilatation rate; First stage.

Author's Affiliation: [1]Associate Professor, [2]Senior Resident, Department of Obstetrics and Gynecology Al Ameen Medical College, Vijaypura, Karnataka 586108, India.

Corresponding Author: Uma Mahesh Sindoor, Senior Resident, Department of Obstetrics and Gynecology Al Ameen Medical College, Vijaypura, Karnataka 586108, India.

E-mail: buzz2lohith@gmail.com

Received on: 28.02.2024 **Accepted on:** 13.04.2024

INTRODUCTION

A High risk pregnancy is identified as pregnancy in which there is a risk of adverse outcome in the mother and/or baby that is greater than the incidence of that outcome in general population. All pregnancies are at risk even though most of the pregnancies and childbirth worldwide are uneventful. Almost 15% of all the pregnant women can develop potentially life-threatening complications which might require skilled care

with some requiring major intervention for survival.[1] Although only 10-30% of the mothers seen in the antenatal period could be classified as high risk, they account for more than 70% of the perinatal mortality and morbidity among mothers studied.[2] Every year, nearly 500000 women die globally because of pregnancy related causes. For each death, nearly 118 women suffer from life-threatening events or severe acute morbidity.[3] Hence this study was carried out to Hence this study was carried out to determine the prevalence of high-risk pregnancies in women attending ANC camps in AL Ameen medical college.

MATERIALS AND METHODS

This prospectivestudy was carried out in 220 cases being brought in OBG dept of AL Ameen Medical College, Bijapur, from July 2023 to December 2023. A detailed data of sociodemographic profile, general examination and obstetric examination were carried out investigations for specific medical complications like Liver function test, Sr-Uric acid, Plasma fibrinogen, Oral Glucose Tolerance test, Fasting & Post prandial blood sugars, complete Haemogram, Peripheral smear, Malarial parasite smear, Blood culture etc. were done whenever necessary. Measurement of neonatal outcome included incidence of still born, dead born, neonatal death, mode of delivery, birth asphyxia, birth weight and admission to NICU.

STATISTICAL ANALYSIS

The data was analyzed using SPSS software version 20. Differences in categorical and continuous data were assessed using the Chi-square test and Student's test, respectively. The statistical test is considered significant if the calculated p-value is less than 0.05.

RESULTS

Table 1: Risk Factors Distribution of Study Subjects

Risk Factor	n	Percentage
Abruptio placenta	8	3.6
Anemia	13	6
Antiphospholipid antibody syndrome	4	1.8
Malpresentation	79	36
Oligohydramnios	7	3.1
PET	99	45
Short stature	10	4.5
Total	220	100

A total of 220 cases were included in this study of the 220 antenatal cases studied, 99 cases (45%) of them had pre eclampsia. Malpresentation pregnancies contributed to about 36% of cases and Anemia were seen in 13 cases (6%).

Table 2: Mode of Delivery

Mode of Delivery	n	Percentage
LSCS	70	31.2
Assisted breech delivery	11	5
Forceps	11	5
NVD	94	42.8
VBAC	34	16
Total	220	100

The mode of delivery was caesarean section in 70 cases (31.2%). Normal vaginal delivery were done in 94 cases (42.8%). Instrumental deliveries were seen in 11 cases (5%).

Table 3: Analysis of Caesarian Section

Caesarian Section	n	Done	Not Done	P-Value
Abruptio placenta	8	5	3	0.08
Anemia	13	2	11	0.004
Antiphospholipid antibody syndrome	4	4	0	0.05
Malpresentation	79	63	16	0.16
oligohydramnios	7	6	1	0.004
PET	99	64	35	0.23
Short stature	10	9	1	0.003

Cesarean rate was about 100% in case of Antiphospholipid antibody syndrome and 99% in case of short statured mothers. Preeclampsia had 65% of cesarean deliveries as preeclampsia forms bulk of cases undergoing cesarean.

Table 4: Maternal Morbidity

Maternal morbidity	n	Percentage
Peripartum Cardiomyopathy	1	0.45
CVT	1	0.45
DIVC	1	0.45
Prongled hospital stay >10 days	104	47.3

Out of 220 high risk patients, 1 patient developed peripartum cardiomyopathy, 1 developed cerebral venous thrombosis, 1 developed disesminated intervascular coagulation.

Table 5: Maternal Mortality

Maternal Mortality	N	Percentage
Yes	1	0.45
No	219	99.55
Total	220	100

1 patients out of 220 high risk patients died where as 219 cases were discharged healthy.

DISCUSSION

High-risk pregnancy was associated with an adverse overall perinatal outcome with increased risk of perinatal morbidities and mortalities. The most common risk factors noted were pre eclampsia, Malpresentation which was consistent with the studies done by Majella MG *et al.*[4] and Chate SU *et al.*[5] who concluded that the maximum high risk pregnancies were seen in preclampsia, malpresentation and anemia.The mode of delivery was vaginal delivery and caesarean section in 31.2% of high risk pregnancies which was in accordance with the study done Kumar N *et al.*[6] and Abedin S *et al.*[7] who concluded that caesarian section was the preferred method of dwlivwey in high risk pregnancies especially in cases of preeclampsia. This study is of Public health importance as it helps us to prevent bad pregnancy outcomes and take necessary precautions among high-risk pregnant women by early detection of adverse outcomes. It helps us to know the knowledge, attitude, and utilization of the National Health Programmes.

CONCLUSION

From this study, we can conclude that early detection and treatment of high-risk pregnancy prevents adverse outcomes which are determined by the prevalence of present and past pregnancy high-risk characteristics. Policies and programmes aimed at improving pregnancy outcomes need to focus on all three sets of factors: women's autonomy, childbearing practices and use of antenatal care.

Funding: No funding sources

Conflict of interest: None declared

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

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Original Article

Indian Journal of Obstetrics and Gynecology
Volume 12 Number 1, January – March 2024
DOI: http://dx.doi.org/10.21088/ijog.2321.1636.12124.5

A Randomized Trial of Intravenous Labetalol Versus Oral Nifedipine in Acute Blood Pressure Control in Hypertensive Emergencies of Pregnancy

Kiran Oswal[1], Uma Mahesh Sindoor[2]

How to cite this article:
Kiran Oswal, Uma Mahesh Sindoor. A Randomized Trial of Intravenous Labetalol Versus Oral Nifedipine in Acute Blood Pressure Control in Hypertensive Emergencies of Pregnancy. Indian J Obstet Gynecol. 2024;12(1):27-30

ABSTRACT

Background: Hypertension in pregnancy, called a disease of degree is more of a sign than a disease by itself. Hypertensive disorders of pregnancy, including chronic hypertension, with or without superimposed pre-eclampsia/eclampsia, gestational hypertension, HELLP syndrome, pre-eclampsia with or without severe features or eclampsia present a significant risk of morbidity to both mother and fetus. Effective pharmacologic therapy modifies the course of the disease. The effective use of anti-hypertensive therapy should be based on well designed controlled clinical trials and the experience of the clinician with the drugs. Hypertensive disorders complicate 5-10% of all pregnancies worldwide.[1] Dangerous hypertension is a harbinger of cerebrovascular accidents, eclampsia, hypertensive encephalopathy and other end organ damage with a poor perinatal outcome.[2]

Methods: This prospective randomized double blind comparative clinical trial with randomization done using computer generated numbers study was carried out in 100 cases being brought in OBG department of AL Ameen Medical College, Bijapur, from July 2023 to December 2023. A detailed data of sociodemographic profile, general examination and obstetric examination were carried out. The pregnant women were randomized with computer generated numbers into two groups to receive either oral nifedipine or intermittent intravenous labetalol injections.

Results: There is no significant difference in the parity of both the groups. Majority of the patients constituting 80% of group A and 58% of group B were primigravida. 69% enrolled in the study were primigravida. There is a higher incidence of pre-eclampsia in the first pregnancy. The majority of the patients had gestational age of 34 to 36 weeks constituting 48% on the whole with 50% and 46% respectively in group A and B. The recruited patients did not significantly differ in gestational age.

Keywords: Intravenous labetalol; Oral nifedipine; Hypertensive emergencies.

Author's Affiliation: [1]Associate Professor, [2]Senior Resident, Department of Ostetrics and Gynecology, Al Ameen Medical College, Vijaypura, Karnataka 586108, India.

Corresponding Author: Uma Mahesh Sindoor, [2]Senior Resident, Department of Ostetrics and Gynecology, Al Ameen Medical College, Vijaypura, Karnataka 586108, India.

E-mail: buzz2lohith@gmail.com

Received on: 28.02.2024
Accepted on: 10.04.2024

INTRODUCTION

Hypertension in pregnancy, called a disease of degree is more of a sign than a disease by itself. Hypertensive disorders of pregnancy, including chronic hypertension, with or without superimposed pre-eclampsia/eclampsia, gestational hypertension, HELLP syndrome, preeclampsia with or without severe features or eclampsia present a significant risk of morbidity to both mother and fetus. Effective pharmacologic

therapy modifies the course of the disease. The effective use of anti-hypertensive therapy should be based on well designed controlled clinical trials and the experience of the clinician with the drugs. Hypertensive disorders complicate 5-10% of all pregnancies worldwide.[1] Dangerous hypertension is a harbinger of cerebrovascular accidents, eclampsia, hypertensive encephalopathy and other end organ damage with a poor perinatal outcome.[2] Labetalol was studied for its use in treatment of hypertensive urgencies in the general population. The smooth onset of action with minimal change in cardiac output and heart rate makes it a unique drug in the management of hypertensive emergency in pregnancy. Nifedipine has been evaluated for its immediate onset of action and ease of administration and no reported adverse effects on the mother or the fetus and on the course of labour. Hence this study was carried out to compare the pharmacodynamics of intravenous labetalol and oral nifedipine in patients with severe hypertension and to compare the maternal and fetal outcomes and adverse effects of both the drugs.

MATERIALS AND METHODS

This prospective randomized double blind comparative clinical trial with randomization done using computer generated numbers study was carried out in 100 cases being brought in OBG department of AL Ameen Medical College, Bijapur, from July 2023 to December 2023. A detailed data of sociodemographic profile, general examination and obstetric examination were carried out. The pregnant women were randomized with computer generated numbers into two groups to receive either oral nifedipine or intermittent intravenous labetalol injections.

STATISTICAL ANALYSIS

The data was analyzed using SPSS software version 20. Differences in categorical and continuous data were assessed using the Chi square test and Student 't' test, respectively. The tests were two sided. The statistical test is considered significant if the calculated p-value is less than 0.05.

RESULTS

A total of 100 cases were included in this study

Table 1: Parity wise distribution of study subjects

Parity	Group-A Labetalol		Group-B Nifedipine		Total 100
	50	%	50	%	
Primi	40	80%	29	58%	69%
G2	6	12%	13	26%	19%
G3	2	4%	6	12%	8%
G4	2	4%	2	4%	4%
χ 2 =7.465 Degree of freedom = 3 P= 0.058 > 0.05					

Parity was comparable in group A and group B. There is no significant difference in the parity of both the groups. Majority of the patients constituting 80% of group A and 58% of group B were primigravida. 69% enrolled in the study were primigravida. There is a higher incidence of pre-eclampsia in the first pregnancy

Table 2: Gestational age distribution of study subjects

Gestational Age	Group-A Labetalol		Group-B Nifedipine		Total 100
	50	%	50	%	
24 Weeks	1	2%	2	4%	3%
25-28	8	16%	7	14%	15%
29-33	21	42%	15	30%	36%
34-36	25	50%	23	46%	48%
37 Weeks	5	10%	3	6%	8%
χ 2 = 1.363 Degree of freedom = 4 P = 0.851 > 0.05					

The majority of the patients had gestational age of 34 to 36 weeks constituting 48% on the whole with 50% and 46% respectively in group A and B. The recruited patients did not significantly differ in gestational age.

Table 3: Systolic blood pressure distribution of study subjects

Systolic Blood Pressure	Group-A Labetalol		Group-B Nifedipine		Total 100
	50	%	50	%	
160-169 mmHg	25	50%	18	36%	43%
170-179 mmHg	14	28%	26	52%	40%
≥ 180 mmHg	11	22%	6	12%	17%
T= 0.477 Degree of freedom = 104 0.635 > 0.05 Not Significant					

The baseline systolic blood pressure of the patients recruited in both the groups did not differ significantly. The mean systolic blood pressure in intravenous labetalol group was 168 mmHg whereas it was 171 mmHg in oral nifedipine group. 50% of patients in group A had a blood pressure range of 160 to 169 mmHg. 52% of patients in nifedipine group had a blood pressure range of 170 to 179 mmHg.

Table 4: Diastolic blood pressure distribution of study subjects

Diastolic Blood Pressure	Group-A Labetalol		Group-B Nifedipine		Total 100
	50	%	50	%	
< 110 mmHg	12	24%	14	28%	26%
≥ 110 mmHg	38	76%	36	72%	74%
T= 0.160 Degree of freedom = 104 0.873 > 0.05 Not Significant					

The baseline diastolic blood pressure did not vary significantly in the groups. The mean of the baseline diastolic blood pressure were 114 mmHg and 111 mm Hg in the groups A and B, respectively. 76% and 72% in groups A and B had diastolic blood pressure more than 110 mmHg.

Table 5: Time taken to achieve target blood pressure distribution of study subjects

Time Taken	Group-A Labetalol		Group-B Nifedipine	
	50	%	50	%
15 min	3	6%	2	4%
30 min	8	16%	17	34%
45 min	22	44%	12	24%
60 min	14	28%	11	22%
75 min	3	6%	8	16%
χ 2 = 9.112 Degree of freedom = 6 0.167 > 0.05 No significant difference				

In group A, 22 patients, constituting 44% of the recruited reached the target blood pressure of less than 150/ 100 mmHg in 45 minutes. 14 patients, constituting 28% of group A achieved the target blood pressure range by 60 minutes. In group B, 17 patients, constituting 34% of the recruited reached the target blood pressure of less than 150/100 mmHg in 30 minutes. 12 patients, constituting 24% of group A achieved the target blood pressure range by 45 minutes. The median time taken in group A is 45 minutes and that of group B is 30 minutes. Overall, there is no statistically significant change regarding the time taken to achieve the target blood pressure.

DISCUSSION

Hypertensive emergency in pregnancy is associated with a considerable morbidity and mortality in both maternal and neonatal populations. The primary aim is to reduce the dangerously elevated blood pressure and ameliorate the severity of the disease. The most vulnerable subjects enrolled in the study were primigravida. There is a higher incidence of preeclampsia in the first pregnancy which was consistent with the studies done by Mukherjee S *et al*.[3] and Zulfeena M *et al*.[4] which concluded that the maximum cases were prmigravida. The majority of the patients had gestational age of 34 to 36 weeks which was in accordance with the study done by Zulfeena M *et al*[4] which concluded that the maximum cases had gestational age of 34 to 36 weeks. The mean systolic blood pressure in intravenous labetalol group was 168 mmHg whereas it was 171 mmHg in oral nifedipine group where as The mean of the baseline diastolic blood pressure were 114 mmHg and 111 mmHg in the groups A and B, respectively. The mean systolic blood pressure of the patients enrolled in the labetalol and nifedipine groups in the present study was 171 mmHg and 170 mmHg, respectively and the recruited reached the target blood pressure of less than 150/100 mmHg in 45 minutes in group A in 44% of cases where asthe recruited reached the target blood pressure of less than 150/100 mmHg in 30 minutes in group B in 34% of cases which was similar to the study done by Raheem *et al*.[5] who concluded that both labetalol and nifedipine are equally efficacious in controlling blood pressure where as Vermilion *et al*.[6] concluded that oral nifedipine is superior when compared to labetalol in blood pressure control where as in our study on statistical analysis, there was no significant difference in the time taken for both the drugs to act for reduction in systolic blood pressure.

CONCLUSION

From this study, we can conclude that management of severe pre-eclampsia is in the control of blood pressure, prevention of complications, fetal surveillance and expedition of delivery if indicated and also both the drugs were

found to be safe and effective in the reduction of blood pressure. None of the drugs were associated with any detrimental maternal or fetal outcomes with respect to the anti hypertensive usage. The tolerance of the patients towards both the drugs was similar.

Funding: No funding sources

Conflict of interest: None declared

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

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Case Report

Indian Journal of Obstetrics and Gynecology
Volume 12 Number 1, January – March 2024
DOI: http://dx.doi.org/10.21088/ijog.2321.1636.12124.5

Mullerian Cyst: Case Report of a Rare Entity

Neelotparna Saikia[1], Balsri Marak[2], Angelin Shalom J[3]

How to cite this article:

Neelotparna Saikia, Balsri Marak, Angelin Shalom J. Mullerian Cyst: Case Report of a Rare Entity. Indian J Obstet Gynecol. 2024;12(1):31-33.

ABSTRACT

Mullerian cysts arise from the remnant of the Mullerian duct. They are usually asymptomatic and are diagnosed incidentally. Ultrasonography and Magnetic Resonance Imaging can help to determine the location and its relation to the surrounding structures, but thorough clinical knowledge and meticulous clinical examination help to rule out other causes and come to a precise diagnosis. The diagnosis is only made by histological examination. Surgical excision is often preferred. Here we report the case of a middle aged woman who presented with an anterior vaginal wall cyst, which turned out to be a Mullerian cyst on histopathological examination.

Keywords: Mullerian cyst; Anterior vaginal wall cyst; Mullerian duct.

INTRODUCTION

Mullerian cysts arise from the embryological remnants of the Mullerian duct. They are one of the most common anterior vaginal wall cysts. It is usually an incidental finding during a gynaecological examination. They are asymptomatic, but when large enough, they can present as swelling per vagina, vaginal discomfort, pressure symptoms like voiding difficulties, vaginal discharge, and dyspareunia.[1] Histopathological analysis is what determines the diagnosis. Management depends on the size of the cyst, but usually complete excision is done to prevent its recurrence.[2]

Author's Affiliation: [1]Senior Consultant, [2]Junior Consultant, [3]DNB Trainee, Department of Obstetrics and Gynecology, Nazareth Hospital, Laitumkhrah, Meghalaya 793003, India.

Corresponding Author: Neelotparna Saikia, Senior Consultant, Department of Obstetrics and Gynecology, Nazareth Hospital, Laitumkhrah, Meghalaya 793003, India.

E-mail: neelots@gmail.com

Received on: 05.12.2023

Accepted on: 10.02.2024

CASE REPORT

A 50-year-old female patient came in with complaints of swelling in the private part for more than 10 years, gradually increasing in size. No bowel or bladder disturbance and no history ofpain. On examination, around 6x6 cm cystic swelling was noted in the antero-lateral wall of the vagina, which was non-tender, extending superiorly till 2 cm below the anterior lip of the cervix and inferiorly till the urethral meatus. Vaginal rugosities are lost over the swelling. No cough impulse was noted, and the size of the swelling remained the same after catheterization of the urinary bladder. No pus points or infective changes were noted in the swelling.

On transvaginal ultrasonography, an oval shaped cystic swelling of 5*4 cm was seen arising from the antero-lateral wall of the vagina. There is no evidence of any connection to the bladder wall. Whole abdomen ultrasonography was done to rule out any associated renal anomalies.

Fig. 1: Mullerian cyst

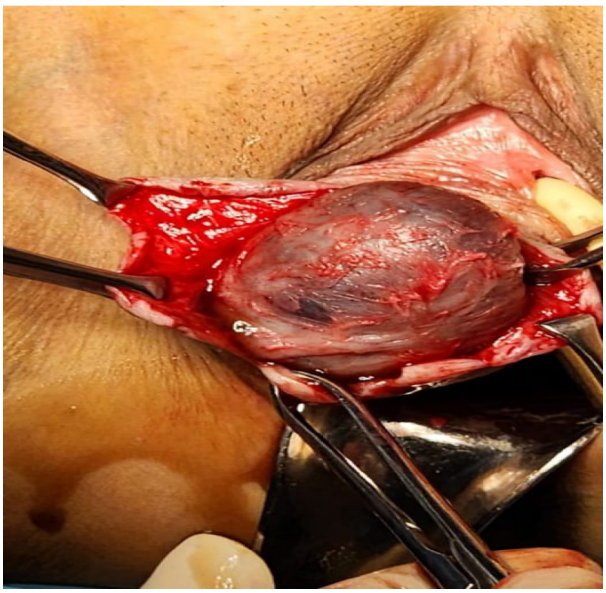

Fig. 2: Cyst being separated from the cyst wall

Complete cyst excision done under spinal anaesthesia. thick, dark brown mucinous fluid aspirated. A histopathological exam showed a Mullerian cyst with a wall made of cuboidal and partly ciliated columnar tubal-type epithelium with focal squamous metaplasia. The postoperative period was uneventful.

Fig. 3: Vaginal wall repair, after excision of the cyst

DISCUSSION

Vaginal wall cysts are rare, with a prevalence of 1 in 200 women.[1] They can be either congenital or acquired. The origin of the vaginal wall cysts may be squamous (traumatic), Wolffian (mesonephric), Mullerian (paramesonephric), or urogenital.[3] Literature says that the most common type of vaginal cyst is Mullerian cyst.[2] Mullerian cysts develop from the remnants of Mullerian ducts or paramesonephric ducts.[4]

Both mesonephric and paramesonephric ducts are present during the embryologic life of the female fetus.[5] During the eighth to ninth week of gestation, the mesonephric duct degenerates due to the absence of testosterone, and the distal ends of the two mullerian ducts fuse, forming the fallopian tubes, uterus, cervix, upper vagina, vestibule, and female urethra. The mullerian ducts join the urogenital sinus to form the sino-vaginal bulb. The sino-vaginal bulb proliferates cranially and evaginates to form the lower third of the vagina. During this process, the squamous epithelium of the urogenital sinus replaces the mucinous columnar epithelium of the Mullerian duct.[2] The remnant of the Mullerian epithelium in the lower third of the vagina may continue its mucinous secretion and later develop as Mullerian cysts.

Mullerian cysts are usually single and can happen anywhere along the mullerian duct. They are usually lined by endocervical epithelium (columnar to cuboidal mucinous epithelium),

endometrioid, or tubal epithelium. They usually present in the third or fourth decade of life.[1,7] The most common location of the Mullerian cyst is the anterolateral wall of the vagina. And they are usually asymptomatic and are typically an incidental finding during gynecological examination, but they may also present with vaginal discomfort, pressure symptoms like voiding difficulties, vaginal discharge, and dyspareunia.[1] Mullerian cysts are seldom associated with other genitourinary abnormalities.[6] Ultrasound helps to characterise the lesion and its nature, and MRI helps to delineate the location and extent of the cyst with respect to the surrounding structures.[6,7] But diagnosis is made only by histopathological examination.[8]

Rarely, Mullerian cysts are also noticed in atypical locations and are classified into three groups: cutaneous ciliated cysts, retroperitoneal formations, and mediastinal Mullerian cysts.[8]

Mullerian cysts are incidental findings that have to be differentiated from the following entities: a) epidermal inclusion cysts of the vagina, which usually occur secondary to surgical procedures like episiotomies. The location of the cyst correlates with the previous surgery. They are lined by squamous epithelium, and the contents are usually keratinous, which is thick. They are lined by squamous epithelium, and the contents are usually keratinous, which is thick and "cheese like' if contaminated. b) Gartner's duct cyst arises from the remnants of Gartner's duct, or Mesonephric duct. They can be associated with multiple abnormalities in the urinary system. The location is usually on the anterolateral wall of the vagina. The lining epithelium is usually cuboidal or low columnar non-mucinous epithelium; c) urethral diverticulum, which is also considered to be one of the differential diagnoses and is lined by transitional epithelium or squamous epithelium.[1,9]

Management is surgical, followed by histopathological examination to establish the diagnosis. But smaller cysts, less than 4 cm, usually require no treatment and can be followed up.[2]

CONCLUSION

Vaginal wall cysts are not uncommon in day-to-day practice. Proper history taking, clinical examination, and imaging modalities can help us arrive at a diagnosis, and plan for further management. A complete cyst excision is usually done to prevent its recurrence. Our case was an unusual scenario where the female was diagnosed with a vaginal wall cyst, which was an incidental finding, and a complete excision was done, with the diagnosis of a Mullerian cyst established by histological examination.

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Case Report

Indian Journal of Obstetrics and Gynecology
Volume 12 Number 1, January – March 2024
DOI: http://dx.doi.org/10.21088/ijog.2321.1636.12124.6

A Rare Case of Xanthogranulomatous Salpingo-oophoritis

Ananya Das[1], Megha Goyal[2], Ahanthem Santa Singh[3], Biswajit Dey[4], Kothuni Christina Chakre[5], Namitha Gowda[6]

How to cite this article:
Ananya Das, Megha Goyal, Ahanthem Santa Singh, *et al*. A Rare Case of Xanthogranulomatous Salpingo-oophoritis. Indian J Obstet Gynecol. 2024;12(1):35-39.

ABSTRACT

Background: Xanthogranulomatous salpingo-oophoritis is an infrequent and challenging diagnosis of the female genital tract. It involves the destruction of the fallopian tube and ovarian tissue by infiltrating inflammatory cells comprising lipid laden macrophages, lymphocytes, plasma cells, and multinucleated giant cells. While more commonly found in gall bladder and kidney, its occurence in female genital tract is rare. This is a case of Xanthogranulomatous salphingo-oophoritis in a 48 year woman who presented with chronic lower abdomen pain and frequent heavy menses for two months. On per abdomen examination a non tender 24 weeks size mass was felt and on vaginal examination the same mass was appreciated, seperate from the uterus. PAP was reported NILM. Ultrasound revealed uterine adenomyoma with bilateral endometrioma of ovaries and associated left hydrosalphinx. Patient underwent hysterectomy with bilateral salphingo-oopherectomy. Histopathological examination revealed uterine adenomyosis, chronic cervicitis with xanthogranulomatous salpingo-oophoritis. The patient recovered well and doing good on follow-up.

Conclusion: Xanthogranulomatous salpingo-oophoritis, though rare is a significant entity because clinically it can mimic chronic pelvic inflammatory disease or endometrioma and even in some cases malignancy. Even clinical examination and imaging might not help much. Therefore, knowledge and awareness about the condition with the help of histopathology can clinch the diagnosis and also prevent radical cancer surgery.

Keywords: Xanthogranulomatous; Lipid-laden; Salpingo-oophoritis; Histopathological; Hysterectomy.

Author's Affiliation: [1]Additional Professor, [2]Post Graduate 2nd year Student, [3]Senior Professor and HOD, [5]Senior Resident, [6]Post Graduate Student, 3rd year, Department of Obstetrics and Gynecology, [4]Associate professor, Department of Pathology, North Eastern Indira Gandhi Regional Institute of Health & Medical Sciences, Shillong 783018, Meghalaya, India.

Corresponding Author: Ananya Das, [1]Department of Obstetrics & Gynecology, North Eastern Indira Gandhi Regional Institute of Health & Medical Sciences, Shillong 783018, Meghalaya, India.

E-mail: mailmedrananyadas@rediffmail.com

Received on: 05.04.2024 **Accepted on:** 20.04.2024

INTRODUCTION

Xanthogranulomatous salphingo-oophoritis is an infrequent and challenging diagnosis of the female genital tract. It involves the destruction of the fallopian tube and ovarian tissue by infiltrating inflammatory cells comprising lipid laden macrophages, lymphocytes, plasma cells, and multinucleated giant cells.[1] While more commonly found in gall bladder and kidney, its occurence in female genital tract is rare. Xanthogranulomatous salpingo-oophoritis has been previously reported in the literature under various names,

including xanthogranulomatous oophoritis, xanthogranulomatous inflammation of the ovaryand fallopian tube, and lipid cell granuloma of the ovary. In 1968 Roth published the first article describing a case of xanthogranulomatous oophoritis and since then, there have been almost 100 cases documented in the literature. Xanthogranulomatous oophoritis has an uncertain specific aetiology, although it's been postulated to result from chronic inflammation, infection, or autoimmune disorders.[2] However due to its locally destructive nature and mass forming capacity as a result of adhesions, this type of inflammation may sometimes mimic malignancy both clinically and radiologically. Therefore, awareness of this entity is of paramount importance in proper management of such patients.[3]

CASE REPORT

48 year woman P4L4 presented with chronic lower abdomen pain and frequent heavy menses for two months. There was no history of any chronic illness like tuberculosis in the past. General Examination: No Pallor, Icterus, Cyanosis, Clubbing, Lymphadenopathy, Edemanoted. On per abdomen examination, a non tender 24 weeks size mass was feltand on vaginal examination, same mass was appreciated, seperate from the uterus. PAP Smear was reported Negative for intra epitheliallesion or malignancy (NILM). Ultrasound revealed Bilateral mild Hydroureteronephrosis with Uterine adenomyoma with bilateral adnexal cystic lesion suggestive of endometrioma (Right: 13*10 cm) (Left: 6*4 cm) with left hydrosalphinx

Fig. 1: Left sided Endometrioma (6*4 cm)

Fig. 2: Right sided endometrioma (13*10 cm)

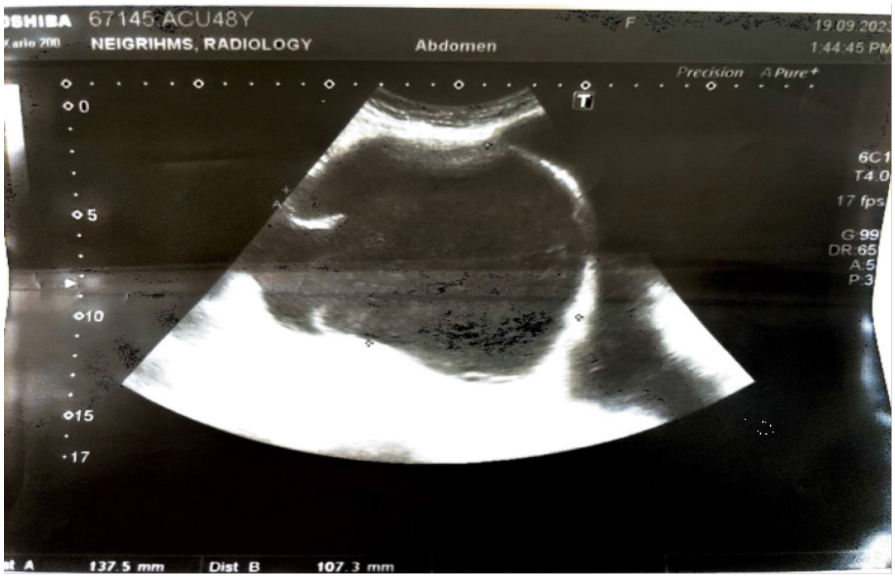

Fig. 3: Left sided Hydrosalphinx (11*8.4 cm)

(11*8.4 cm).

Patient underwent hysterectomy with bilateral salphingo-oopherectomy with bilateral ureteric stenting.

Intra-operative: Uterine size was found to be 10-12 weeks with Bilateral tubo-ovarian mass Right (~15*12 cm) >Left (6*7 cm). Bilateral ovarian mass was found densely adhered to bowel posteriorly.

Frozen section revealed features suggestive of benign cyst.

Final Histopathological examination revealed uterine adenomyosis, chronic cervicitis with xanthogranulomatous salphingo-oophoritis.

Fig. 4 & 5: Low and high power histopathology images showing sheets of foamy histiocytes admixed with lymphocytes and occasional neutrophils (H &E, 40x and 400x).

The patient recovered well and doing good on follow-up.

DISCUSSION

Xanthogranulomatous inflammation involving the female genital tract is an uncommon and distinct kind of persistent inflammation with tissue destruction in the affected organs[4] However, it is less common in the female genital tract with only a handful of cases been reported. This has been found in patients aged 21-75 years with a mean age of 45 years.[5]

The pathogenesis of xanthogranulomatous oophoritis is unclear and many theories that are of etiopathogenesis have been postulated, such

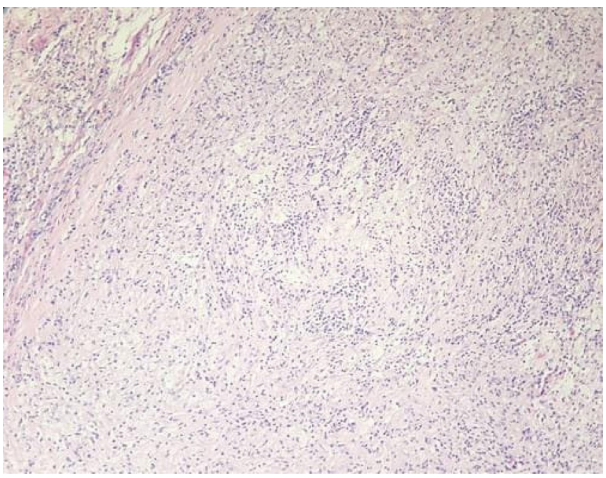

Fig. 4

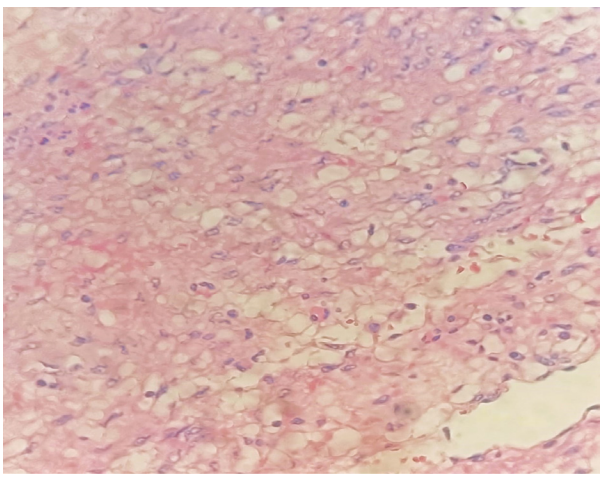

Fig. 5

as theory of infection, endometriosis, intrauterine contraceptive device, inborn errors of lipid metabolism, and drug induced. Amongst these theories, the most accepted theory is of infection, which is supported by clinical evidence of infection and growth of bacteria such as *Escherichia coli*, *Bacteroides fragilis*, and *Proteus vulgaris* from the affected tissue by culture.[6] Another explanation for this phenomenon is tissue necrosis, which is brought on by a prolonged infection and results in the ongoing release of lipids and cholesterol from the dead cells. The xanthomatous process begins as a result of macrophages phagocytosing these biological components.[8]

Radiological findings of xanthogranulomatous oophoritis may simulate endometriosis or malignant ovarian neoplasm, due to the involvement of adjacent organs and pelvic peritoneum resulting in adhesions. Grossly, the involved ovary is enlarged and replaced by a solid, yellow lobulated well circumscribed mass, sometimes involving adjacent organs, there by mimicking malignancy.[7] Microscopically, there is infiltration of sheets of foamy cells admixed with mixture of inflammatory cells such as lymphocytes, plasma cells, neutrophils with multinucleated giant cells.[1] Foamy histiocytes (xanthoma cells) are histiocytes with abundant lipid-laden cytoplasm having vacuolated appearance, responsible for the yellow color on gross examination. The emergence of foam cells may be attributed to Inefficient or inappropriate antibiotics applied in the early phase of infection that resulted in ineffective control of bacterial multiplication or Presence of a lipid metabolic disorder that induces hyperlipidemia and the foam cells are formed when the lipid deposited is phagocytosed by phagocytes.[4]

Differential diagnosis of xanthogranulomatous oophoritis includes infections like tuberculosis, fungal infections which can be ruled out by culture and special stains for the causative organisms. Malakoplakia is also one of the differential diagnoses.[9] In malakoplakia, the basophilic cytoplasmic concentric calcific bodies within histiocytes (Michaelis-Gutmann bodies) are found which were absent xanthogranulomatous inflammation ruling out this condition.[9] Granulomatous salpingo-oophoritis in surgical pathology practice in developing countries may be seen in many other conditions most common being tuberculosis. Others include a foreign body reaction to suture material introduced at a previous operative procedure, associated Crohn's disease, previous diathermy, a necrotizing reaction following previous surgery, endometriosis and bacterial tubo-ovarian abscess. In few cases no cause could be attributable for the granulomatous inflammation and small cortical granulomas in the ovary are seen called as idiopathic granulomas.[10] Antibiotic therapy has been attempted, but it has not succeeded in reducing ovarian mass.[11]

As done in our case, surgery is the treatment of choice. But an Awareness of this inflammatory lesion among the clinicians, radiologists and pathologists may not only prevent overdiagnosis and extensive surgeries for the patients but may also reduce morbidity giving a better prognosis to these patients

CONCLUSION

Xanthogranulomatous salphingo-oophoritis, though rare is a significant entity because clinically it can mimic chronic pelvic inflammatory disease or endometrioma and even in some cases malignancy. Even clinical examination and imaging might not help much. The final confirmation of the diagnosis can only be made after histopathological examination. It must be kept as a differential diagnosis specially in cases with complex tubo-ovarian masses.[6]

Therefore, knowledge and awareness about the condition with the help of histopathology can clinch the diagnosis and also prevent radical cancer surgery.

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Case Report

Indian Journal of Obstetrics and Gynecology
Volume 12 Number 1, January – March 2024
DOI: http://dx.doi.org/10.21088/ijog.2321.1636.12124.7

Ovarian Ectopic Pregnancy: A Rare Case Report

Sukalyan Halder[1], Rajneet Bhatia[2], Payel Mallick[3]

How to cite this article:
Sukalyan Halder, Rajneet Bhatia, Payel Mallick. Ovarian Ectopic Pregnancy: A Rare Case Report. Indian J Obstet Gynecol. 2024;12(1):41-44.

ABSTRACT

Ovarian ectopic pregnancy is rare and constitutes around 3% of all ectopic pregnancies. Its presentation is similar to tubal ectopic pregnancy and is difficult to diagnose based on the presentation and ultrasound findings. Here, we describe one such case which we encountered in our practice. Primigravida patient at early gestation presented with vaginal spotting and pain in lower abdomen. She was suspected as ruptured ectopic pregnancy based on examination and ultrasound findings. Immediate laparotomy was performed and patient was diagnosed to have ruptured ovarian pregnancy intraoperatively. Partial ovariotomy was performed and the case was successfully managed. Histopathology confirmed the diagnosis. Surgery is the mainstay of definitive diagnosis and treatment. Identifying these cases early is imperative as such patients can collapse suddenly and there are high chances of maternal morbidity and mortality.

Keywords: Ovarian Ectopic Pregnancy; Ultrasound Findings; Histopathology; Maternal Morbidity and Mortality.

INTRODUCTION

Ectopic pregnancy is the most common gynecological emergency which can lead to pregnancy related deaths in the first trimester. In this entity, the implantation and development of the ovum occurs outside the uterus.[1] 95% of all ectopic pregnancies occur in the tube and remaining 5% can occur in the ovary, cervix and abdomen.[1] Ovarian ectopic pregnancy is the most common non tubal ectopic pregnancy and the incidence varies between 0.5-3%.[2] It poses diagnostic challenges and is usually confirmed on surgery and proven on histopathology.[2]

Author's Affiliation: [1]Senior Consultant, [2]Secondary DNB Trainee, [3]Primary DNB Trainee, Department of Obstetrics and Gynecology, Nazareth Hospital, Shillong, Meghalaya 793003, India.

Corresponding Author: Rajneet Bhatia, [2]DNB Trainee, Department of Obstetrics and Gynecology, Nazareth Hospital, Shillong, Meghalaya 793003, India.

E-mail: rajneet1910@gmail.com

Received on: 08.01.2024

Accepted on: 21.02.2024

CASE REPORT

Twenty nine years primigravida in her eighth week of gestation presented with vague pain in lower abdomen more on the right side for the last three days. The pain was dull in nature and not radiating to the back and thighs. She also gave history of vaginal spotting for eight days. On examination, patient was conscious, oriented but severe pallor was present with mild tachycardia and hypotension. On abdominal examination, she had mild tenderness in right iliac fossa and there was

left forniceal fullness and tenderness on per vaginal examination. The hematological and biochemical tests were within normal limits except hemoglobin being 6.8 grams. Patient was resuscitated with crystalloid solutions and an urgent ultrasound was done which was suggestive of complex right tubal mass lesion with moderate free fluid in pelvis suggestive of hemoperitoneum. Her vitals started deteriorating even with all the resuscitative measures. Patient and her relatives were counselled about her condition, further management and associated risks. She was immediately taken up for emergency laparotomy in view of ruptured ectopic pregnancy in hypovolemic shock. Intraoperatively, moderate hemoperitoneum was noted. Bilateral fallopian tubes were intact but there was breech in the continuity of right sided ovarian tissue. Chorionic villi were evacuated from the ovarian tissue and partial ovariotomy was performed on the right side. Two units of blood followed by three doses of intravenous iron sucrose were given to the patient. Her post operative period was uneventful and she was discharged on the fifth post-operative day. Histopathological examination confirmed the intra-operative diagnosis of ovarian ectopic pregnancy.

DISCUSSION

St. Maurice reported the first case of ovarian ectopic pregnancy in 1682.[3] The estimated prevalence of ovarian ectopic pregnancy since then is found to be in the range from 1:7000 to 1:70,000.[4]

The pathophysiology of ovarian ectopic pregnancy is implantation of the fertilized ovum over the surface of the ovary. In primary ovarian ectopic, the ovum gets fertilized in the follicle only, before it is expelled from the ovary. The secondary ovarian ectopic occurs when the fertilized ovum is regurgitated from the fallopian tube and implanted in the stroma.[5] Many theories are proposed to describe these implantation abnormalities which include ovum liberation delay, thickening of the tunica albuginea, tubal dysfunction and intra-uterine contraceptive devices.[4]

The various risk factors include advanced maternal age and parity, pelvic inflammatory diseases, sexually transmitted infections, prior pelvic surgery, previous history of ectopic pregnancy, history of insertion of intrauterine contraceptive devices and assisted reproductive techniques.[6] Our patient had no such associated risk factors which was also seen in the report published by Zahra *et al*.[10]

The incidence of this dreadful complication is on rise due to the development in assisted reproductive technology which is reported to be 6% of all in-vitro fertilization ectopic pregnancies. Ovarian ectopic pregnancy following fresh, cryopreserved and donor embryos have also been reported. Hasegawa *et al.* reported one such unique case where ovarian ectopic was diagnosed in a surrogate after day 5 fresh blastocyst transfer.[7] The increased incidence post in-vitro fertilization procedures can be attributed to usage of higher volume of culture media, high levels of estrogen and progesterone, scars on ovarian surface caused by oocyte retrieval, increased vascularity after ovarian stimulation, high numbers of transferred embryos or blastocysts.[7] It has also been observed that high estrogen levels affect the normal physiology of the fallopian tube including the impairment of the protein secretion and frequency of the ciliary motion which hampers embryonic motility and implantation leading to increased likelihood of implantation outside the uterine cavity.[8]

More than 90% of ovarian ectopic pregnancies rupture before the end of first trimester and lead to complications like hemorrhage and hypovolemic shock. Such patients present in emergency and may have a history of pain in abdomen, bleeding per vaginum and syncopal attack. The patients who visit earlier may be asymptomatic or present with usual pregnancy symptoms of nausea, vomiting and constipation with history of amenorrhoea.[6]

Though the clinical picture may arise the suspicion of ectopic pregnancy but ultrasound plays an important role in specific diagnosis. Transvaginal ultrasound demonstrates an adnexal mass or cyst on or within the ovary which cannot be separated from the ovary even on applying pressure via the probe. Colour Doppler may show a hyper vascular rim-ring of fire sign. Yolk sac or embryo may be seen rarely. Mild to moderate fluid in pelvis is seen in cases of ruptured ovarian ectopic pregnancy.[9] In cases where patients are hemodynamically stable and ultrasound diagnosis is not certain, serial beta hCG levels with repeat ultrasound can be performed until the diagnosis is established.

Till 1800's, medical management was the norm to manage the ectopic pregnancy but it led to almost 60% of maternal mortality. The first successful surgery was performed in USA in 1759.[4] At present, surgical management forms the mainstay of treatment, laparoscopy being considered as the gold standard. Wedge resection of the ovary, partial oophorectomy or salpingo-oopherectomy is

performed followed by histopathology to confirm the diagnosis. Preoperative and intraoperative diagnosis is challenging and is often confused in cases with ruptured corpus luteal cyst, ruptured hemorrhagic cyst or ruptured tubal ectopic pregnancy.[6]

In 1878, Spiegelberg established four criteria to diagnose ovarian ectopic pregnancy which is still being practiced. These include[10]

1. Gestational sac is located in the ovary.
2. Ectopic pregnancy is attached to the uterus with the ovarian ligament.
3. Ovarian tissue is present in the gestational sac and proven histologically.
4. The fallopian tube along with fimbriae of the involved site is intact.

Following is the new diagnostic criteria set by Sergent *et al.* in 2002[5]

1. Serum beta hCG ≥ 1000 IU/L and empty uterine cavity on transvaginal ultrasound.
2. Confirmation of ovarian involvement on ultrasound during surgical exploration with either bleeding or visualization of chorionic villi or atypical cyst on the ovary.
3. Fallopian tubes are normal and intact.
4. Serum beta hCG not detected after the treatment.

Fessehaye et al reported an interesting case of chronic ovarian ectopic pregnancy which was misdiagnosed initially and patient had undergone manual vacuum aspiration for missed abortion on the basis of thickened endometrium on ultrasound. The patient then presented with minimal vaginal bleeding for 2 months post procedure, ultrasound was repeated which was suggestive of 9x9 cms left adnexal mass with a nonviable fetus. Laparotomy followed by left ovariotomy was performed and diagnosis was confirmed on histopathology.[2]

The role of medical treatment is not so well established for ovarian ectopic pregnancy though reports on successful management of such cases with methotrexate are available. Literature also reveals cases where methotrexate is directly injected in the gestational sac under ultrasound guidance. The use of methotrexate offers the advantage of preserving the ovary and avoiding the post surgical adhesions formation although it can be used in cases where the criteria of medical management are fulfilled.[5] Birge *et al.* reported a successful management of ovarian ectopic pregnancy diagnosed by transvaginal scan in a woman at 6 weeks gestation. She was given a single dose of methotrexate and was followed with beta hcg levels which returned to normal within 3 weeks of the injectable dose.[1]Al-Dabal *et al.* also reported a case of ovarian ectopic pregnancy after ICSI which was diagnosed on ultrasound and was managed medically after a joint decision and counselling the patient. As the fall in beta hCG levels was not significant, repeat dose of methotrexate was given to the patient but eventually the patient landed up with the emergency surgery as there was rupture of the ectopic gestation.[8]

CONCLUSION

Ovarian ectopic pregnancy, though rare, can land up in a near-miss situation. It can pose a serious threat to life of a women and hence any clinical suspicion should never be neglected. Ultrasound assessment by a skilled professional and close monitoring will ensure early diagnosis which is crucial to mandate treatment that helps in preserving as much fertility as possible along with reducing the maternal morbidity and mortality.

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Present your results in logical sequence in the text, tables, and illustrations, giving the main or most important findings first. Do not repeat in the text all the data in the tables or illustrations; emphasize or summarize only important observations. Extra or supplementary materials and technical details can be placed in an appendix where it will be accessible but will not interrupt the flow of the text; alternatively, it can be published only in the electronic version of the journal.

Discussion

Include summary of key findings (primary outcome measures, secondary outcome measures, results as they relate to a prior hypothesis); Strengths and limitations of the study (study question, study design, data collection, analysis and interpretation); Interpretation and implications in the context of the totality of evidence (is there a systematic review to refer to, if not, could one be reasonably done here and now?, What this study adds to the available evidence, effects on patient care and health policy, possible mechanisms)? Controversies raised by this study; and Future research directions (for this particular research collaboration, underlying mechanisms, clinical research). Do not repeat in detail data or other material given in the Introduction or the Results section.

References

List references in alphabetical order. Each listed reference should be cited in text (not in alphabetic order), and each text citation should be listed in the References section. Identify references in text, tables, and legends by Arabic numerals in square bracket (e.g. [10]). Please refer to ICMJE Guidelines (http://www.nlm.nih.gov/bsd/uniform_ requirements.html) for more examples.

Standard journal article

[1] Flink H, Tegelberg Å, Thörn M, Lagerlöf F. Effect of oral iron supplementation on unstimulated salivary flow rate: A randomized, double-blind, placebo-controlled trial. J Oral Pathol Med 2006; 35: 540–7.

[2] Twetman S, Axelsson S, Dahlgren H, Holm AK, Källestål C, Lagerlöf F, et al. Caries-preventive effect of fluoride toothpaste: A systematic review. Acta Odontol Scand 2003; 61: 347–55.

Article in supplement or special issue

[3] Fleischer W, Reimer K. Povidone-iodine antisepsis. State of the art. Dermatology 1997; 195 Suppl 2: 3–9.

Corporate (collective) author

[4] American Academy of Periodontology. Sonic and ultrasonic scalers in periodontics. J Periodontol 2000; 71: 1792–801.

Unpublished article

[5] Garoushi S, Lassila LV, Tezvergil A, Vallittu PK. Static and fatigue compression test for particulate filler composite resin with fiber-reinforced composite substructure. Dent Mater 2006.

Personal author(s)

[6] Hosmer D, Lemeshow S. Applied logistic regression, 2nd edn. New York: Wiley-Interscience; 2000.

Chapter in book

[7] Nauntofte B, Tenovuo J, Lagerlöf F. Secretion and composition of saliva. In: Fejerskov O,

Kidd EAM, editors. Dental caries: The disease and its clinical management. Oxford: Blackwell Munksgaard; 2003. pp 7–27.

No author given

[8] World Health Organization. Oral health surveys - basic methods, 4th edn. Geneva: World Health Organization; 1997.

Reference from electronic media

[9] National Statistics Online—Trends in suicide by method in England and Wales, 1979–2001. www.statistics.gov.uk/downloads/theme_health/HSQ 20.pdf (accessed Jan 24, 2005): 7–18. Only verified references against the original documents should be cited. Authors are responsible for the accuracy and completeness of their references and for correct text citation. The number of reference should be kept limited to 20 in case of major communications and 10 for short communications.

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