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Outcome of pregnancy in patients who suffered first trimester bleeding per vaginum

Dr. Jitendra V Shukla[1], Dr. Prakruti Gilitwala[2], Dr. Parth Sethi[3], Dr. Meet Chavada[*4]

[1]Professor, Department Of Obst & Gynaec, Sbks Medical Institute & Research Centre, Piparia, Vadodara (Guj)
[2]2nd Year Resident, Department Of Obst & Gynaec, Sbks Medical Institute & Research Centre, Piparia, Vadodara (Guj)
[3]1st Year Resident, Department Of Obst & Gynaec, Sbks Medical Institute & Research Centre, 4. Piparia, Vadodara (Guj)
[*4]2nd Year Resident, Department Of Obst & Gynaec, Sbks Medical Institute & Research Centre, Piparia, Vadodara (Guj)

***Corresponding Author**
Dr. Meet Chavada

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ABSTRACT
About one fourth of all gravid patients suffer from first trimester bleeding p/v. Since ours is a rural tertiary health care centre catering MCH services to surrounding rural population, we manage many patients with first trimester

bleeding per vaginum. We were inspired to carry out the study. In this study we found that patients who had closed os with present cardiac activity when treated properly in time got cured and carried pregnancy to term to have a favourable outcome.

1. INTRODUCTION

Although gender of a human newborn is decided at the time of fertilization of ovum the somatic differentiation starts at puberty. In boys pubertal changes starts at around age of 13 years while in girls they start albeit earlier at around age of 10 years under the influence of hypothalamic pituitary ovarian axis activation. Activated hypothalamus secretes GNRH which incites FSH secretion from anterior pituitary. FSH in turn stimulates the ovaries for maturation of graffian follicles and maturation of the ovum. Developing graffian follicles produce oestrogen which brings about proliferative phasre in the uterine endometrium. Mid cycle LH surge from anterior pituitary triggers rupture of mature graffian follicle to release the female gamete. After ovulation the theca cells of graffian follicle gets leutinized and the graffian follicle gets converted in to corpus luteum. Corpus luteum starts secretion of progesterone. Progesterone brings about secretory phase of the menstrual cycle. Progesterone also brings about decidual changes in the functional layer of endometrium and prepares the endometrium for reception and implantation of fertilized ovum. At birth ovary of female newborn has nearly 2 million oocytes. But due to the property of autolysis and apoptosis of the germ cells, only 400,000 are left at the age of puberty.

Only about 400 undergo maturation during the reproductive life of a female. So in absence of use of any contraceptive method there are 400 opportunities for pregnancy. Again maturation, fertilization, implantation and development of embryo in to a newborn is under intricate control of interplay of hormones from hypothalamo-pituitay -ovarian axis.

Menarche marks the onset of reproductive life of a female. After menarche girl gets monthly menstrual cycle. The cycles may be irregular with variable amount of blood loss for the initial few years during teenage but usually become normal after 20 years of age. Every month one follicle matures and one ovum is released. After fruitful intercourse fertilized ovum reaches the uterine cavity after 4 to 5 days and gets embedded in the endometrium. 22ND day onwards the blood examination for HCG estimation can detect biochemical pregnancy. Successful outcome of conception is determined by normal anatomy of female genital tract, normal functioning of HPO axis, adequacy and balance of hormones. chromosomal array of the embryo, nutrition, behavioural pattern and life style of woman. Any deficiency or deviation can hamper the growth and developmental outcome of embryo. Hypogastric pain, excessive vomiting and bleeding from the genital tract heralds abnormality or structural defect or development of the embryo and threat is imposed to continuation of pregnancy. Intrauterine development of foetus can be divided In to (a) ovular phase during first two weeks after fertilization. (b) embryonic phase from 2 to 10 weeks after ovulation and(c) foetus after 10 weeks of ovulation till delivery.

Miscarriage is a very common accident during pregnancy. Chromosomal anomalies like triploidy, monosomy, haploidy and deletion of arm constitute major cause for first trimester bleeding and ultimate expulsion. Chorionic hematoma due to pooling of blood between chorion and uterine wall is a very common cause of bleeding p/v. Defective development or implantation of embryo as in case of vesicular mole and ectopic pregnancy can also incite first trimester bleeding.

Trauma and coitus can also provoke bleeding per vaginum in first trimester of pregnancy. Abnormalities of genital tract, Maternal fever can also lead to bleeding per vaginum during pregnancy. Endocrine imbalance, systemic diseases, metabolic disorders and immunological disorders can lead to bleeding per vaginum during early pregnancy. Defective and abnormal imlplantation, placental structural and positional abnormalities of the placenta can also lead to bleeding per vaginum during pregnancy but they matter more in later trimesters.

2. REVIEW OF LITERATURE

Around 30% of women suffer from first trimester bleeding [1] &[5.] 2nd trimester bleeding is less common[5]. Out of all naturally conceived about 15% pregnancy end up in miscarriage. Ectopic pregnancy accounts for2% of all pregnancies.

Any bleeding per vaginum before 14 completed weeks of pregnancy is considered as first trimester bleeding.[1] &[2][12] Bleeding may be torrential in amount capable of inducing shock with symptoms of shoulder pain, breathless ness and unconsciousness1. Most common causes for early pregnancy bleeding are pregnancy loss, threatened abortion and ectopic pregnancy. Gestational trophoblastic disease, polyps and cervical malignancy are other rare causes for bleeding per vaginum. Implantation bleeding although physiological may raise a concern to the woman as well as clinician. Obstetric per vaginal examination, ultrasonography and HCG testing are the tools of immense help in determining the aetiology. If products of conception are seen peeping out of the external os, it indicates inevitable abortion or incomplete abortion and need to be removed. Intra uterine pregnancy with cardiac pulsations are suitable cases for watchful waiting and conservative management.

Spontaneous abortion and miscarriages refer to first trimester pregnancy loss. Vaginal bleeding in the presence of an intrauterine pregnancy and a closed cervix with presence of cardiac activity is diagnostic of threatened abortion. Presence of cardiac activity will determine further management and outcome of pregnancy[[.9] Implantation of embryo at extrauterine sites develops in to ectopic pregnancy. Although rare cause of first trimester bleeding it may prove fatal when it ruptures. Estimation of beta subunit of HCG is of immense value in diagnosis of abnormally implanted pregnancy. Intra uterine pregnancy must be visible when HCG levels cross discriminatory level of 1500 -3000milliIU per ml. Absence of embryonic pole in any gestational sac of 25 mm or more should raise possibility of early pregnancy loss. Absence of cardiac pulsations in a foetal pole of 7mm or more is suggestive of embryonic demise. Any gestational sac implantation bleeding is the bleeding from the unoccupied uterine cavity when the embryo size is not big enough to completely fill up the uterine cavity [6][7] chorionic haematoma is collection of blood between chorion and the uterine wall. It is the most common cause of bleeding p/v. GTDS are pregnancy related tumors which can produce first trimester bleeding p/v. These patients present with h/o passage of grapelike structures per vaginum. Although bleeding is present, it is substantially scanty. Other rare causes of first trimester bleeding are post coital bleeding, fibroid, polyp, warts, tumors, vaginitis and trauma. During pregnancy under influence of hormones cervix becomes more sensitive and has a tendency to bleed. Even on routine p/v exam or coitus it may bleed. Other common cause of bleeding can be

abnormal embryo due to abnormal number of chromosome.[8] EarlyPregnancy bleeding is usually of maternal origin and due to disruption of decidual vessels.

For determining the aetiology, Pelvic examination along with ultrasonography and estimation of HCG titre are useful.

Management of early pregnancy bleeding depends upon the aetiological cause of bleeding. Detailed history, careful pelvic examination, HCG testing and ultrasound are useful tools to arrive at diagnosis. In early pregnancy loss, mifepristone, misoprostol and uterine aspiration will constitute the line of management. While patients having closed cervix with cardiac activity can be managed by bed rest, abstinence, avoiding strenuous activity and progesterone support.

3. AIMS AND OBJECTIVES

[1] To determine the percentage of women suffering first trimester bleeding per vaginum.

[2] To know the etiological factors for bleeding in early pregnancy.

[3] To determine the percentage of presence and absence of cardiac activity, In pts with first trimester bleeding p/v

[4] To determine rate of successful outcome of conservative management in patients with early trimester bl p/v

[5] To determine the late complications during later phase of gestation

[6] To determine the mode of delivery.

[7] To determine the rate of gestational age at time of delivery

[8] to determine the complications in later months of pregnancy

4. MATERIAL AND METHODS

STUDY DESIGN: Prospective study

PLACE OF STUDY: obstetric department, DHIRAJ Hospital

TIME SCALE OF STUDY: 1st October 2023 to 30 September 2024. And follow up to 30 April 25

SOURCE OF DATA patients coming to antenatal clinic and obstetric dept with bleeding per vaginum in first trimester of pregnancy and patients coming to labour room in emergency with first trimester bleeding p/v.

SELECTION CRITERIA INCLUSION CRITERIA

All pregnant women patients with Bleeding pv during first trimester of pregnancy attending OPD All patients coming to labour room in emergency with h/o first trimester bleeding p/v.

All the patients willing to participate

All the patients available for follow up in antenatal clinic and delivering in Dhiraj hospital

5. EXCLUSION CRITERIA

Patients having endocrine disorders like DM, Thyroid dysfunction, Patients suffering from bleeding disorders and blood dyscrasias

patients not willing to participate patients not available for follow up patients delivering elsewhere

METHODOLOGY The patients reporting in the antenatal clinic and labour room with bleeding per vaginum in first trimester of pregnancy and fulfilling the inclusion criteria and willing to participate in the study were enrolled for the study after taking informed consent. All the suffering patients were included in the study irrespective of their parity. They were grouped separately depending upon the presence of cardiac activity on USG examination. The patients showing absent cardiac activity or incomplete abortion were subjected to suction evacuation and discharged after 24 hours. they were advised follow up after one week. The patients with presence of cardiac activity in the embryo were treated with bed rest, nutritional supplements and progesterone support as per the merit of case. On stoppage of bleeding p/v after confirming the presence of cardiac activity the patients were allowed home. They were advised adequate bed rest and to abstain from strenuous work. Abstinence was advised. They were asked to attend antenatal clinic regularly and to report to labour room in case of any complaint or recurrence of bleeding. All the patients included in study attended the ANC regularly and reported to labour room for labour. Mode of delivery was decided on merits of the case. Type of delivery, baby weight and apgar score were noted

6. OBSERVATION AND RESULT

During the study period, 236484 patients attended the OPD of dhiraj hospital. 56130 patients were registered for obgy dept

TABLE 1

TOTAL NO OF PT	236484	PERCENTAGE 100%
PT IN OBGY OPD	56130	23.735
PT IN OTHER POD	1,80,354	76.27%

attended the OPD of Dhiraj hospital. Since our hospital has joined hands with govt for maternal and child health, obgy opd forms a major chunk of total no. of pt.

TABLE 2

Total no of pt	56130	%
new registration	18114	32.27
follow up cases	38016	67.73

TABLE 3

total new pt in obgy	18114
antenatal pt	12248
gynec pt	5866

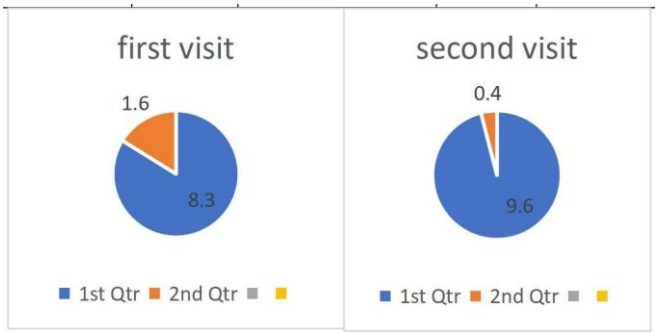
18114 were new registration while 38016 were follow up pt coming for routine anc. Out of 18114 12248 were antenatal patients, while 5866 were gynaecological pt. Out of12248 fresh pt 4635 were reporting with first trimester pregnancy, while rest were pt with 2 and 3rd trimester.

1066 patients reported with first trimester bleeding p/v on first visit. while 642 patients had bleeding p/v. in subsequent visits.

The patients were examined clinically and p/s and p/v examination observations were as in TABLE 3

FIRST VISIT	TOTAL NO OF [T	PT WITHCLOSED OS	PT WITH OPEN OS	PT WITH PRESENTCARDIA ACTIVITY	PT WITH ABSENT CARDIAC ACTIVITY
FIRST	1066	894	172	826	68

SECOND VISIT	642	618	24	586	32



so out of1708 patients reporting with bleeding p/v in first trimester 1412 patients had viable pregnancy with closed os and presence of cardiac activity. Total 100 patients had missed abortion with absent cardiac activity but retained products.

Out of 196 patients with open os 132 patients had retained products of conception while 64 had empty uterine cavity

total no pt	196	
pt with retained products	132	
pt with empty ut	64	13 had ectopic pregnancy.

TABLE 5

the patients with retained products were subjected to suction evacuation and products removed while those with empty uterine cavity were treated with antibiotics, uterotonics and haemostatic drugs. Out of 13 patients of ectopic pregnancy 4 were treated with methotrexate while 9 were treated surgically.

THE patient who had viable pregnancy with closed os and cardiac activity were put on complete bed rest ,haemostatics and micrionized progesterone 200 mg

table 16

Total no of pt	Pt who recovered	Pt who had missed abortion
1412	1266	146

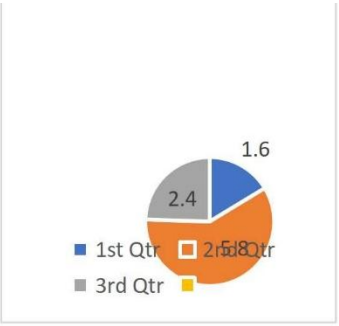


Table 7

TOTAL NO OF LSCS	**312**
CPD	**73**
APH	**12**
FETAL DISTRESS	**70**
NON PROG FIRST STAGE	**61**
MALPRESENTATION	**59**
PREVIOUS 2 LSCS	**15**

Total no of 1266 patients continued the pregnancy and had uneventful course during their antenatal period. They came to labour room with onset of labour pain and had labour out come as under.

table 16

Total no of pt	Preterm delivery	Full term vaginal delivery	Full term lscs
1266	208	746	312

INDICATIONS for LSCS

PREVIOUS 1	**22**
MAL POSITION [OP]	**47**
MISCE	**07**

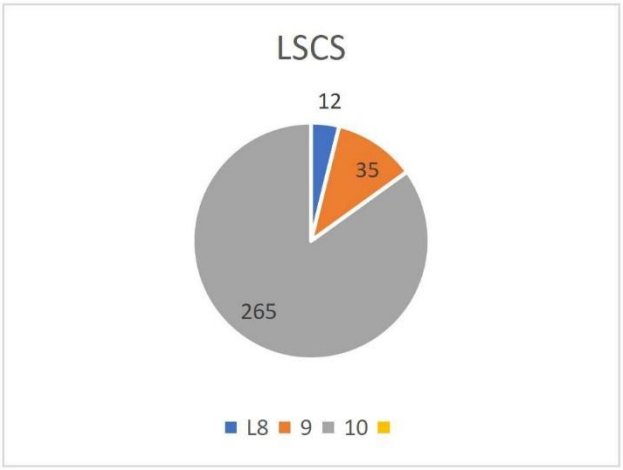
TABLE 09

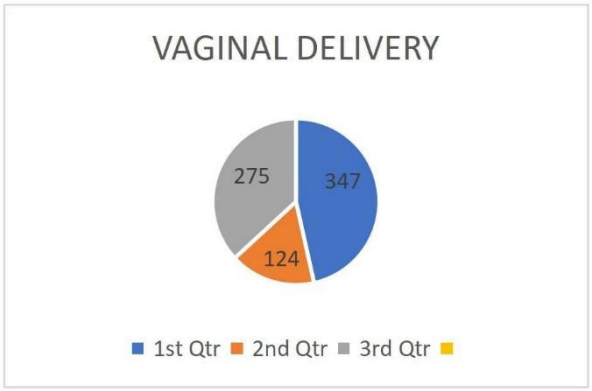
APGAR SCORE AT BIRTH

	L8	09	10	
LSCS	12	35	265	
VAGINAL DELIVERY	347	124	275	746

7. DISCUSSION AND RESULTS

OUT OF ALL THE PREGNANCY about 20 to 30 percent of pt suffer from the first trimester





bleeding p/v. About 80 of patients aborting during first trimester present with complain of bleeding p/v in first trimester. while managing a patient with early trimester bleeding p/v one must rule out feto embryonic abnormalities before proceeding for conservative line of management. many times the patient presents in late stage with passage of products of conception as incomplete or complete abortion. in such cases d and c is the only line of management. Patients presenting with early trimester bleeding pv with closed cervical canal and cardiac pulsations can be managed successfully by conservative line of management.in this study 146 (1o.33%) out of 1412patients treated conservatively, had missed abortion and were terminated surgically. so 89.67% of patients stopped bleeding p/v and continued pregnancy beyond 34 weeks with regular antenatal care.

out of1266 (16.43%) patient had delivery between 34 and 37 weeks. ALL the neonates were attended by neonatologist and resuscitated successfully. They had apgar score of 8 to 10.out of 1058 pregnancy beyond 37 weeks 312 had abdominal delivery. Operative vaginal delivery was avoided in view of precious pregnancy.

conclusion

bleeding in first trimester of pregnancy is a major cause of concern and dispair. TIMELY Approach to a doctor can save not only the pregnancy but also save the woman from excessive blood loss and subsequent anaemia and poor health.. FIRST trimester bleeding usually occurring before 12 weeks of pregnancy is mostly due to chromosomal anomalies and is a nature's way of eliminating congenitally abnormal population incapable of living a normal life. Implantation bleeding usually suggests the unoccupied uterine space due to small size of embryo during initial period of implantation. Bleeding with viable intrauterine pregnancy can be salvaged if timely diagnosed and. treatment is initiated. successful outcome of pregnancy also necessitates life style modifications and regular ante natal visits. once first trimester bleeding is controlled subsequent bouts are unusual and rest of the antenatal period will be uneventful. Congenital anomalies in babies delivered to the patients who suffered early pregnancy bleeding is not significant.

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