MINOR DEGREE PLACENTA PRAEVIA;
MODE OF DELIVERY

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ABSTRACT… Objective: To find out the mode of delivery when the distance of placenta edge to internal os is more than 2 cm and less than 5 cm i.e minor degree placenta praevia. **Study Design:** Descriptive Study. **Place and Duration of Study:** The study was done at Combined Military Hospital Rawalpindi and Military Hospital Rawalpindi from January 2005 to January 2006. **Patient and Methods:** A total of 100 patients admitted in obstretic ward were selected according to the inclusion and exclusion criteria by convenience sampling. Patients with ante partum haemorrhage after 34 weeks admitted, resuscitated and then investigated by blood tests and transvaginal ultrasound. Only patients with placental edge to internal os distance of more than 2 cm were selected for study. Booked patients of placenta praevia type 1 and type 2 of more than 37 weeks after bishop scoring and cervical ripening were delivered vaginally by ARM and Oxytocin. **Results:** In our study, out of selected patients 100 patients of placenta praevia type 1 and type 2 were selected, results of these patients were (a) 63% patients were delivered vaginally. (b) 37% of patients were delivered by caesarean section. (c) 46% of patients with para 4 had placenta praevia as compared to primigravida who had placenta praevia 15%. (d) 59 % of deliveries occurred at 34-36 years of gestation while 41% of deliveries were occurred at gestation of >36 years. **Conclusions:** Patients with placental edge more then 2 cm should be given a trial of vaginal delivery instead of going straight away to caesarean section.

Key words: Minor degree of placenta praevia, Transvaginal ultrasound, placenta accreta, transabdominal ultrasound, vaginal delivery, caesarean section.

INTRODUCTION

Antepartum haemorrhage complicates 2-5% of pregnancies of which approximately one-third are due to placenta praevia[1]. It accounts for significant maternal and perinatal morbidtity[2]. If placenta encroaches on the cervical os it is considered as major or complete praevia; if not, then minor or partial praevia exists. This diagnosis has evolved from the original clinical I-IV grading system and is determined by ultrasonic imaging techniques, relating the leading edge of the placenta to the cervical os and the leading fetal pole[3].

Risk factors for placenta praevia includes advancing maternal age, multi parity, previous placenta (4-8%), Caesarean section, post abortion pregnancy, abnormal forms such as succenturiate lobe or placenta diffusa and large placenta in multiple pregnancy[4]. Number of incidence is rising with increasing caesarean sections performed. The incidence is 2% after one previous caesarean section 4.1% after two and 22% after three[5].

Preterm delivery is also more common among women with placenta praevia. The association between low birth weight babies and placenta praevia is chiefly due to preterm delivery and to a lesser extent with fetal growth restriction[6]. Women with placenta praevia are at a relatively higher risk of developing complications if the lower placental edge is thick. Intergration of the shape of the lower placental edge into transvaginal sonographic assessment of placenta praevia may improve the prediction of mode of delivery and clinical outcome[7].

Placenta migration may occur progressively throughout the third trimester. The initial position of the placental edge and the subsequent rate of migration can be used to predict the route of delivery[8].

MATERIALS AND METHODS

It was a simple descriptive study carried out at the Military Hospital and Combined Military Hospital Rawalpindi. The duration of the study was from January 2005 to January 2006.

PROCEDURE FOR DATA COLLECTION

A total100 patients admitted in obstretics ward were selected according to the inclusion and exclusion criteria by convenience sampling. The study was confined to the minor degree placenta praevia cases after 34 weeks. Other possible causes of antepartum haemorrhage were excluded. The patients with antepartum haemorrhage after 34 weeks were admitted and resuscitated in the obstretic ward. Detailed history and physical examination was carried out. General condition, pulse, blood pressure, bleeding per vaginum were noted, blood

sampled and crossmatched and intravenous line was secured. Duration of pregnancy, amount of vaginal bleeding, signs of shock, abdominal pain, tenderness, uterine contractions, fetal heart sounds were recorded.

The possible risks like age, parity, previous caesarean section, previous abortion, previous retained placenta, multiple pregnancies were noted. Associated complications like Rh incompatibility, hypertension, diabetes mellitus were also recorded. Investigations like complete blood count, blood sugar random, urine analysis, hepatitis B and C screening and coagulation studies were carried out. Diagnosis were made from history and physical examination and confirmed by transvaginal sonography. Only the patients with type 1 and type 2 with placental edge to internal os distance more that 2 cm and less than 5 cm were selected for study. Diagnosis of booked cases of placenta praevia type 1 and type 2 was reconfirmed due to the possibility of placental migration at 34 weeks and 36 weeks and then at 38 weeks. They were assessed for Bishop scoring. After cervical ripening with prostaglandin were delivered vaginally by ARM and sytocinon. Few patients reported in emergency with spontaneous labour and delivered vaginally. Management was based upon the extent of haemorrhage and duration of pregnancy. To the patients having severe bleeding, active management was given by blood transfusion and immediate caesarean section. The patients who present before 34 weeks with mild bleeding were given injection dexamethasone for fetal lung maturity and expected management was given like bed rest, blood transfusion or iron therapy to keep the haemoglobin above 11 gm / dl and closed maternal and fetal monitoring was done and if they remain stable they were sent home.

RESULTS

In my study five thousand patients were admitted in obstretic ward out of which hundred patients of minor degree placenta praevia were selected. They were selected according to inclusion and exclusion criteria. Out of these hundred patients 63 patients were delivered vaginally and 37 patients by lower segment caesarean section. There was no maternal or fetal mortality. Analysis of maternal age showed maximum patients were 31 to 35 years of age and lowest incidence was after 35 years of age and below 25 years. Relation to parity showed that maximum cases of minor degree of placenta praevia occurred in para-4, (46%) and minimum cases in primigravida i.e 15%. Relation to gestational age showed that maximum cases were delivered at 34 to 36 weeks of gestation and minimum cases at more than 36 weeks of gestation.

Table-I. Mode of delivery

Mode of delivery	Frequency	%age
LSCS	37	37
SVD	63	63
Total	100	100

Fig-1. Frequency of mode of delivery

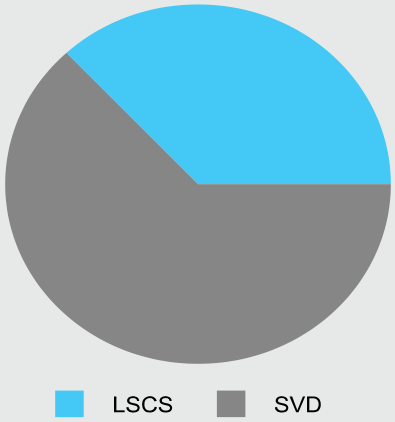


Table-II. Patient's age

Patient's age (Yrs)	Frequency	%age
<25	18	18
25-30	37	37
31-35	38	38
>35	07	07
Total	100	100

DISCUSSION

Placenta praevia involves implantation of the placenta over the internal os. Variant include complete implantation over the os-total placenta praevia or placental edge partially covering the os-partial placenta

Fig-2. Patient's age

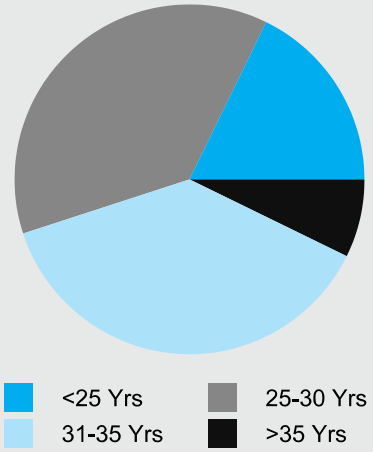
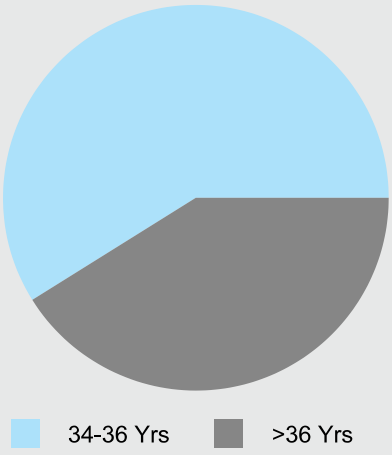


Table-III. Gestational age

Gestational age (Yrs)	Frequency	%age
34-36	59	59
>36	41	41
Total	100	100

Fig-3. Gestational age



praevia or the placenta approaching the border of the os-marginal placenta praevia. A low lying placenta implants in the caudal one half to one third of the uterus or within 2-3 cm from the os[3].

In my study a total of 5000 patients were admitted from January 2005 to January 2006 in which 100 patients of minor degree placenta praevia where distance of placental edge to internal os was more than 2cm.In this study minor degree placenta praevia was diagnosed using transvaginal ultrasound in the late 3rd trimester of pregnancy. There are two previous studies to examine ultrasound findings in late pregnancy which had a larger time interval between ultra sound and delivery[11,12]. Oppenheimer et al[10] performed a retrospective analysis of 52 cases of placenta praevia where ultrasound examinations were performed on average 05 weeks prior to delivery. Dawson et al[14] use translabial ultrasound in 40 women with suspected placenta praevia with an average interval of six weeks between ultrasound and delivery.In the latest study apart from the use of trans labial father than transvaginal ultrasound only thirty one women had a placenta that was less than 3 cm from the internal os at thirty two weeks of gestation.

The time interval between ultrasound and delivery has significant influence of the classification and clinical outcome of placenta praevia. Several studies have demonstrated that the distance between placental edge and internal cervical os change. In one study the mean rate of placental migration was estimated at 0.54 cm / week in the third trimester[13]. In my study minor degree placenta praevia was diagnosed after thirty four weeks of the gestation, after which the chances of placental migration were minimal. In constrast the placenta is likely to have migrated, on average 2.7 cm and 3.2 cm in the two previous studies where the ultrasound and delivery interval was five and six weeks, respectively.

Our Study analysis of age and parity showed that the frequency of placenta praevia increased across the entire maternal age and multiparity which is consistent with studies done in other countries[9,10].

The upper limit of the placental edge to internal os distance for the use of the term praevia is unclear and undefined. Oppenheimer et al[11] included cases where the distance was up to 5.8 cm. Dawson et al[12] arbitrarily chose an upper limit of 3.0 cm. In the present study, an upper limit of 2 cm was used. Given the paucity of published evidence, The Royal Collage of Obstretcians and Gynacologists recommendation is based on the

findings of Oppenheimer et al who performed TVS in the third trimester on 127 women and 52 were shown to have placenta praevia[11]. In 31 cases there was complete or major placenta praevia. Of the 21 partial praevia, the mean distance of the leading placental edge to the cervical os was significantly different in those who required caesarean section than those achieving vaginal delivery with a cut-off distance of 2 cm.

This study is in contrast to study by Amaranth Bhide[14] et al who studied the mode of delivery according to the distance between placental edge to internal os in late third trimester[13]. They divided the cases into three degree groups for analysis Group 1 consisted of women where the placenta edge reached or overlapped the internal os.

Group 2 included those women where the placental edge was from 0.1 to 2.0 cm from the internal os, while Group 3 included women where the placental edge was more than 2.0 cm from the internal os[14]. This is in comparison to my study where patients whose transvaginal ultrasound showing placental edge to internal os distance more than 2 cm and less that 5cm were selected.

In my study the incidence of placenta praevia was 2%. The true incidence is difficult to determine in a referral hospital like Military Hospital Rawalpindi / Combined Military Hospital Rawalpindi where the observed incidence is higher as most of the normal deliveries take place out side hospital. While the reported incidence varies from 1 in 100 to 1 in 1000[15]. In my study placenta praevia was more common in women of age 31-35 years, higher parity which is in comparison to other studies[16]. In my study 59% women were delivered at 34 to 36 weeks of gestation and 41 % after 36 weeks. This is in contrast to Amarnath Bhide study where 42 women were delivered by caesarean section Group-1 and 40 in Group-2 at 38+2 weeks and 39 in Group-3 at 36+6 weeks[14].
In Amarnath study 17 patients were delivered vaginally where placental edge to internal os distance was 2.1-3.5 cm (39 patients) so the rate of vaginal delivery is 63%[14]. This is comparable to my study where out of 100 patients with placental edge to internal os distance more than 2 cm 63% were delivered vaginally and 37% were delivered by lower segment caesarean section due to haemorrhage, fetal distress, failed progress of labour and cephalopelvic disproportion. In my study the maximum cases of minor degree placenta praevia were of 31 to 35 years of age. This study is compareable to study by cieminski A, Dlugolecki F. In their study the occurance of placenta praevia was increased with maternal age and was highest in women age 35 years or older and lowest in women less than 25 years. In their studies advancing age and multi parity appears to increase the occurrence of placenta praevia[16].

Hussain GA etal, in their study see the prevelance of lower segment placenta and its relation with previous caesarean section, parity and maternal age. In their study the highest prevelance of placenta praevia, (2.58%) was seen in 3rd and higher gravid group. Also higher prevelance was seen in 30 years and above age group as compared to below 30 years age group[17].

CONCLUSIONS

The data of my study support the trial of vaginal delivery in cases with a placental to internal os distance > 2 cm and an elective caesarean section when this distance is 2 cm or less.

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