

Role of transvaginal sonography in the study of migration of low-lying placenta from second trimester to end of third trimester

Geeta Rani^{1*}, Sachin Kuimar Singh², Usha Kumari³, Anupama Sinha⁴

¹Senior Resident, Department of Obstetrics and Gynaecology, Jawahar Lal Nehru Medical College, Bhagalpur, Bihar, INDIA.

²Assistant Professor, Department of Radiodiagnosis, JLNMCH, Bhagalpur, INDIA.

³Professor and Head, Department of Obstetrics and Gynaecology, JLNMCH, Bhagalpur, 812001, INDIA.

⁴Associate Professor, Obstetrics and Gynaecology, JLNMCH, Bhagalpur, 812001, INDIA.

Email: drgeetarani81@gmail.com

Abstract

Objective: To study the migration of low lying placenta, diagnosed in the 2nd trimester by Transvaginal sonography.

Methods: The study was conducted in Department of Obstetrics and gynaecology JLNMCH Bhagalpur between Jan 2018-Dec 2018. A total of 200 cases were studied, out of which 15 cases had low lying placenta, i.e. 7.5% in which the distance between centre of internal os to the leading edge of placenta was < 3 cm. **Results:** Study showed that 7.5% cases, i.e. 15 cases had low lying placenta out of which 67% migrated to upper segment by third trimester. In 5 cases out of 200 i.e. 2.5% cases it remained at its own place and continued as placenta praevia. The rate of migration of placenta was less in case of prior caesarean section or DandC and MROP (Manual removal of placenta). Migration of placenta was not seen when the initial distance was < 1.5 cm. **Conclusion:** The prevalence of low lying placenta was 7.5% in mid trimester which decreases to 2.5% at term. The rate of placental migration was 76%. Factors like initial distance between the lower edge of placenta and internal os, placental position and previous birth by caesarean section influenced placental migration.

Key Word: Low lying placenta, Placenta praevia, Placental migration.

*Address for Correspondence:

Dr. Geeta Rani, Senior Resident, Department of Obstetrics and Gynaecology, Jawahar Lal Nehru Medical College, Bhagalpur, Bihar, INDIA.

Email: drgeetarani81@gmail.com

Received Date: 15/11/2018 Revised Date: 01/12/2018 Accepted Date: 30/12/2018

DOI: <https://doi.org/10.26611/1012917>

Access this article online

Quick Response Code:



Website:

www.medpulse.in

Accessed Date:
23 January 2019

INTRODUCTION

Low lying placenta is a condition in which the placenta moves in the lower part of the uterus and blocks the cervix. If it partially covers the cervix it is called as placenta praevia. In some cases as it blocks the cervix completely, natural delivery is not possible and a caesarean section is performed. However; in about 90% of cases it will migrate

upward on its own and then there is no concern. Placenta praevia has been categorised into 4 types

1. **Complete placental praevia**- when the placenta completely covers the internal os.
2. **Partial placental previa** – When the placenta partially covers the internal Os.
3. **Marginal placental previa**- where placenta just reaches the internal Os, but does not cover it.
4. **Low lying placenta**- where placenta extends into the lower uterine segment but does not reach the internal os.

Low lying placenta is a common observation at the routine obstetric ultrasonography done in second trimester which alarms the obstetrician. Transvaginal ultrasonography is a well established, safe and accurate method of placental localisation and is superior to transabdominal USG. The prevalence of low lying placenta in mid- trimester where the placenta is lying within 3 cm from the internal os diagnosed sonographically in the 2nd trimester ranges from 6-46% and reduces to as low as 0.5% at term due to

How to cite this article: Geeta Rani, Sachin Kuimar Singh, Usha Kumari, Anupama Sinha. Role of transvaginal sonography in the study of migration of low-lying placenta from second trimester to end of third trimester. *MedPulse – International Journal of Gynaecology*. January 2019; 9(1): 23-25. <http://medpulse.in/Gynaecology/index.php>

placental migration. Placental migration is a positional change of the placental from the lower segment to upper segment due to the net result of differential growth of placenta towards well vascularised fundus and degeneration of peripheral villi in lower uterine segment that receives less blood supply and the differential growth rates of lower segment of the uterus and placenta³. The present study was undertaken to evaluate the phenomenon of placental migration and the factors influencing placental migration.

METHODS

The study was carried out in Deptt. Of Obstetrics and Gynaecology, JLNMCH, Bhagalpur, Bihar. A total of 200 cases were studied. TVS was performed using 12 MHz probe. Cervical canal was visualised and the distance between centre of the internal Os and the leading edge of placenta was measured. Where the distance between centre of the internal Os and leading edge of placenta was <3 cm. at 18 - 20 weeks, they were well included in the study³. TVS was repeated every 4 weeks until the lower edge of the placenta migrated beyond 3 cm or the patient had delivered, whichever is earlier.

Table 1: Prevalence of low lying placenta at mid trimester and rate of placental migration. (n=200)

No. Of mid trimester low lying placenta.	No. Of placental at term/ delivery.	Rate of placental migration
15 (7.5%)	5 (2.5%)	67%

Table 2: Relation between previous pregnancy events and placental migration.

Previous pregnancy events outcome	No of mid trimester low lying	No. of placenta migrated	% age of migration
1. Vaginal delivery	08	07	75%
2. Caesarean section	05	02	40%
3.D and C /MROP	01	01	100%

Table 3: Placental migration in relation to initial distance from internal os.

Initial dist. from Int. Os	No of mid-trimester low lying placenta	No of migra placenta	% of migration
<1.5 cm	02	00	00
1.5 to 2.0 cm	04	03	75%
2.1 - 3.0 cm.	09	07	78%

Table 4: Placental migration in relation to the position of placenta.

Position of placenta	No of mid trimester low lying placenta	No of migrated placenta	% age of migration
Anterior	11	08	73%
Posterior	04	02	50%

RESULTS

A total of 200 women underwent TVS ultrasonography around 18-20 weeks of gestation to identify low lying placenta. Out of these, 15 women had low lying placenta. The prevalence of low lying placenta in early mid trimester was 7.5% out of which 90% presented with bleeding P/V. Follow up USG of these 15 cases of low lying placenta showed that 10 cases of low lying placenta diagnosed in mid trimester migrated from internal os beyond 3 cm. This resulted in prevalence of placenta praevia up-to 2.5% at term. Age and the parity of the women does not influence the migration of placenta. The rate of placental migration was highest when the initial distance between the lower edge of placenta and internal os was more than 2 cm. There were 2 cases in which distance from internal os was <1.5 cm and none of these 2 cases showed migration of placenta. Anteriorly situated low lying placenta showed lesser migration when compared to posteriorly situated placenta. The rate of placental migration was 75 % in women with previous vaginal deliveries when compared with women having previous caesarean section 40% and 100 % women with prior history of DandC and Manual removal of placenta.

DISCUSSION

The diagnosis of low lying placenta in the midtrimester Obstetric USG has considerably increased, probably due to more frequent use of transvaginal sonography. The present study noted the prevalence of low lying placenta as 7.5% which is higher compared to Taipale, who reported the prevalence as 4.5%⁴. Advancing maternal age and multiparity are risk factors for low lying placenta in the mid trimester; but they do not appear to be the risk factors for persistence of placental praevia at term. The age and parity do not adversely affect the migration of low lying placenta. Damage to the endometrium during caesarean section predisposes to low implantation of placenta and also impairs the migration of placenta. Women with at least one prior caesarean section are at 2-6 times greater risk of development of placental praevia.⁵ In the subsequent pregnancy and in women with prior MTP the risk was 1.7 time higher⁵. Placental migration depends mainly on the initial distance between lower leading edge and the centre of the internal os. The migration rate was maximum when the distance was > 2 cm. In the present study placental migration was observed, more in anteriorly situated placenta when compared to posteriorly situated placenta which is in accordance to other studies.

CONCLUSION

Low lying placenta is a matter of concern to the obstetricians. 67% of the mid trimester low lying placenta migrates to the upper segment by term. However two cases

of low lying placenta previa with initial distance < 1.5 cm from the os is continued as placenta praevia.

REFERENCES

1. Leerentveld RA, Gilberts EC, Arnold MJ et.al. Accuracy and safety of transvaginal sonographic placental localization. *Obstet Gynecol* 1990; 76; 759-62.
2. Ancona S, Chatterjee M, Rhee I, et.al. The midtrimester placental praevia: a prospective follow-up. *Eur J Radiol* 1990; 10:215-6.
3. Oppenheimer L, Holmes P, Simpson N *et al.* Diagnosis of low lying placenta: can migration in the third trimester predict outcome? *Ultrasound Obstet Gynecol* 2001; 18:100-2.
4. Tipale P, Hiilesmaa V, Ylostalo P. Diagnosis of placenta previa by transvaginal sonographic screening at 12-16 weeks in a non-selected population. *Obstet Gynecol* 1997;89:364-7.
5. Ananth CV, Smulian JC, Vintzileos AM, The association of placental praevia with history of caesarean delivery and abortion: a meta analysis. *Am J Obstet Gynecol* 1997; 177:1071-8.
6. Ghourab S, Al-Jabari A. Placental migration and mode of delivery in placental praevia: transvaginal sonographic assessment during the third trimester. *Ann Saudi Med* 2000; 20:382-5.

Source of Support: None Declared
Conflict of Interest: None Declared

