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# A STUDY OF LOCATIONS OF PLACENTA IN USG:

**Radiodiagnosis**

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## ABSTRACT

USG in Antenatal Care has become a norm. Diagnosis of any abnormalities and the importance in finding out the underlying pathology in a limited amount of time is the need of the time so as to take precautionary steps in order to save the patient as well the developing fetus against any catastrophes. During an obstetrical ultrasound, evaluation of the fetus is chief priority but often, the other component which is also important like the placenta is not given the attention they deserve. This study focuses on the aim to find the most common frequency of placental locations in this part of the world. The association factor of the highest frequency location with the total population has to be found out. This study helps the fellow radiology practitioners to know the most common locations of the placenta and thus helps them to better locate the placenta.

## KEYWORDS

Placenta, Location, Uterus, USG, Imaging.

USG in Antenatal Care has become a norm. Diagnosis of any abnormalities and the importance in finding out the underlying pathology in a limited amount of time is the need of the time so as to take precautionary steps in order to save the patient as well the developing fetus against any catastrophes. During an obstetrical ultrasound, evaluation of the fetus is chief priority but often, the other component which is also important like the placenta are not given the attention they deserve [1]. Both the American College of Obstetricians and Gynecologists and the American Institute of Ultrasound in Medicine recommended that the standard obstetric sonogram in the second and/or third trimester the morphology and function of the umbilical cord [2,3]. While abnormalities in amniotic fluid volume and umbilical cord Doppler velocimetry are done sonographic assessment of placental location (PL), after exclusion of previa or marginal insertion is often limited to a mere notional description without any link to possible implications on pregnancy. [4-6]. Furthermore, studies of its association with specific obstetric complications have reached contradictory conclusions and no consensus has yet been achieved regarding the relationship between PL and non-vertex fetal presentation (FP) at term [7,8].

This study focuses on the aim to find the most common frequency of placental locations in this part of the world. The association factor of the highest frequency location with the total population has to be found out. This study helps the fellow radiology practitioners to know the most common locations of the placenta and thus helps them to better locate the placenta.

**Aims and Objectives:**

1. To study the common locations of placenta in antenatal ultrasound.

**Materials and Methods:**

This study was done in the Department of Radio-Diagnosis and Imaging in Travancore Medical College, Kollam

The study was done using 180 patients who had come for the routine check – up for their ante – natal care and had been referred to the Department of Radiology for routine second trimester and third trimester scan.

The patients were asked to drink sufficient water and then were asked to lie in supine position. The USG gel was applied sufficiently and the USG abdomen were carried out.

The routine scanning was done to note the health of the baby and also particular importance was given to note the position of the placenta. The area were the placenta was noted in an excel sheet and necessary statistcs were done.

**Report:**

**Table 1: Mean age of the population:**

| Sample Size | Mean age of the Population |
|---|---|
| 180 | 25.61 years |

**Table 2: The Locations of the Placenta**

| | Frequency |
|---|---|
| FUNDAL | 9 |
| FUNDOPOSTERIOR | 33 |
| FUNDOANTERIOR | 6 |
| POSTERIOR UPPER | 41 |
| ANTERIOR UPPER | 69 |
| ANTERIOR LOWER | 5 |
| POSTERIOR LOWER | 5 |
| RIGHT LATERAL WALL | 4 |
| LEFT LATERAL WALL | 4 |
| PARTIAL PREVIA | 3 |
| COMPLETE PREVIA | 1 |
| TOTAL | |

**Table 3: Table of Association**

| Type | P Value | Significance (<0.05) |
|---|---|---|
| Anterior Upper | 0.041 | Sig |

**Discussion:**

The visualization of in-utero fetal activity during the various stages of gestation may help Perinatologists comprehend the existing relationships between fetal behavior and neurological development and maturation [08]. In the era in which "reducing the primary cesarean delivery rate represents a worldwide priority", [7,8] an investigation focused on PL and its impact on fetal presentation at term should be considered relevant. A very recent ACOG consensus strongly recommends offering pregnant woman with non-cephalic FP after 36 gestational weeks the option of external cephalic version [5].

Only eutherian mammals possess placenta. The human placenta is discoid, because of its shape; hemochorial, because of direct contact of the chorion with the maternal blood and deciduate, because some maternal tissue is shed at parturition. The placenta is attached to the uterine wall and establishes connection between the mother and fetus through the umbilical cord. The fact that maternal and fetal tissues come in direct contact without rejection suggests immunological acceptance of the fetal graft by the mother. The placenta is developed from two sources. The principal component is fetal which develops from the chorion frondosum and the maternal component consists of decidua basalis. When the interstitial implantation is completed on 11th day, the blastocyst is surrounded on all sides by lacunar spaces around cords of syncytial cells, called trabeculae. From the trabeculae develops the stem villi on 13th day which connect the chorionic plate with the basal plate. Primary, secondary and tertiary villi are successively developed from the stem villi. Arterio-capillary-venous system in the mesenchymal core of each villus is completed on 21st day. This ultimately makes connection with the intraembryonic

vascular system through the body stalk.

In our study the highest frequency was found to be the Anterior Lower location. This was the most common site followed by posterior upper and fundoposterior. Our study is in agreement with Salvatore Gizzo et al [9]. The only limitation of the study was that we in the Department of Radiology could not know the progression and the final fate of the specific type of placetaal locations. This study has a bright future and I sincerely hope that this study may help the Gynecologists also to know the different outcomes of the Maternal and the Fetal Health status. In our study there was a twin pregnancy I which both the placentas were found in the Anterior Lower location of the Uterus.

**Conclusion:**

The most common location was found to be Anterior Lower location of the uterus.

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