

# Cesarian Section Delivery and its Effect on the Incidence of Placenta Previa and Abruptio Placentae

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**ABSTRACT**

Section as caesarean is a surgical technique where the incision done via women uterus (hysterectomy) and abdomen (laparotomy) for delivering one or extra babies. In every former c/s, previa of placenta and abruption risk upsurge. The study aim is to observe the relation between the former caesarean section (CS) and previa of placenta and abruption in such pregnancy. A study as retrospective was performed throughout (July 1<sup>st</sup> 2018 and August 20<sup>th</sup> 2019) in Teaching Hospital of Al-Zahraa. Throughout the study period of, one hundred and nineteen pregnant women (PW) of scar former history admitted to the hospital for c/s or vaginal delivery, seventy of PW are diagnosed as with previa of placenta and of abruption of placenta via ultrasound and verified throughout delivery. Another forty nine PW were with NO complication. PW with APH because of other reasons were omitted. Information was gathered through comprehensive history. Official settlements and verbal consent of all PW were taken. Statistical analysis was done via utilizing the SPSS and suitable statistical tests were performed.

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## 1. INTRODUCTION

Recent revised classification of previa of placenta, it classifies into true previa of placenta if the tissue of placenta is covering the internal cervical, and placenta as low-lying when the placental is lying within 2cm of cervical but does not cover it [1].

### 1.1 Incidence of previa of placenta

Previa of placenta complicates approximately 3-5 per 1000 pregnancies in the world [2]. The occurrence is considerably more at twenty weeks about 5% and then it starts lessen till it reaches 0.5% at weeks thirty six and more [3].

### 1.2 Abruptio of Placentae

Is defined as separation as premature from the uterus of a placenta typically implanted following twenty weeks gestational age and prior to the delivery of fetus [1]. The incidence rate of abruption of placenta 0.5% or 1 in 200 deliveries [10], of all antepartum hemorrhage, about one-third might be because of abruption of placenta, 40% - 60% of abruption of placenta occur prior to 37 weeks gestational age [1]. The repetition rate of abruption of placenta was higher after severe than mild PA, after severe abruption there was two-fold

repetition risk whereas after mild, there was no risk for repetition [11], [19- 29].

### **1.3 Abruptio Placentae**

Types of abruptio placentae include (1) *Revealed hemorrhage*: The hemorrhage occurs from the lower part of placenta and blood escapes through the cervical. In such type, the major hemorrhage is apparent externally. (2) *Concealed hemorrhage*: In such type, the blood accumulates between the placenta and the uterine wall. (3) *Concealed and revealed of mixed hemorrhage*: In such type, the hemorrhage occurs close to the placenta and is both concealed and revealed [12]. Sign and symptom depend on the type of abruption of placenta, patient may be asymptomatic, or may present with painful vaginal bleeding, or may present with sign of shock (in concealed bleeding) [10- 14]. The management depends on the abruption severity, fetal status and the age of gestation. Immediate delivery depends on the severity and whether the fetus alive or dead. If the fetus alive, CS delivery has been shown to have a better outcome than vaginal delivery.

If the fetus is dead (20%) of case, vaginal delivery should be trained after maternal resuscitation [15], [16].

## **2. Methodology**

The information were gathered from the obstetrical department and labor room in al-Zahraa teaching hospital in Al-kut city. Al-kut is the center of wasit governorate. A *cross-sectional design* was conducted to achieve the aim and objectives of such study. The gathered cases were women with former CS admitted to the labor room, at total of (119) pregnant ladies were included throughout the period of study, (70) of ladies were with previa of placenta or abruption, were (49) women without complication.

Sampling: The cases were taken from PW whose age were between (18-45) years, who are pregnant in between 28-41 weeks of gestation admitted with APH because of P.P and P.A

Inclusion criteria are Pregnant aged between (18-45) years, 20-41weeks of gestational age, who had second births with former CS admitted with APH because of P.P and A.P females that were not having previa of placenta or abruption were selection as control.

Exclusion criteria are PW with no information on maternal demographics and behaviors throughout pregnancy patient without former scar, APH not because of P.P or P.A.

The patient included in such study were diagnosed to have low lying placenta in their first trimester confirmed via performing transvaginal ultra sound utilizing vaginal probe. In the third trimester, transvaginal u/s used to diagnose previa of placenta. We depend mainly on the clinical presentation for the diagnosis of the abruption of placenta rather than transvaginal u/s.

The period of the collection of the information, was extended from 1 July 2018 -20 august 2019. The rest of time was for information analysis and writing up the thesis.

Information were obtained from PW attending the study setting for management through direct interview via the investigator himself. In addition to collecting the basic demographic details questions were asked about the medical history, social history, gynecological history and obstetric history to confirm the presence or absence of related risk factor. The informationbase included the socio-demographic information on the age of PW, number of C/S, number of antenatal care visit interval between subsequent pregnancy, number of miscarriages, socio-economic status and fetal outcome.

Analysis of data was performed via utilizing (SPSS) software for windows, version 23, IBM, USA, information of 119 PW with former section were pass in and analyzed.

Chi square test was used to determine the differences significance in frequencies of every category. P value = or < than 0.05 was of significance.

### 3. Results

In the current study, 119 patient with history of former scar admitted to the labor room throughout the period of study, 51 (42.9%) of them were without PP OR PA, whereas, 68 (57.2%) of them admitted with complication, 49 (41.2%) of them were have previa of placenta and 19 (16%) were have abruption of placenta. The patient age was ranged between 18-45, 14.3% of PW aged between 18-20, 37% aged between 21-25, 23% aged between 26-30, 16.8% aged between 31-35, 7.6% aged between 36-40 and 8% aged >41. Increased maternal age >21 no associated with increase the number of placenta previa and abruption as p-value was 0.296 (not significant). Table (1) show the gestational age of the PW.

**TABLE 1.** Gestational Age

		Frequency	Percent
Valid	25.00	1	.8
	32.00	1	.8
	31.00	1	.8
	34.00	3	2.5
	36.00	1	.8
	36.00	21	18.5
	37.00	26	20.9
	35.00	31	25.2
	39.00	22	19.3
	40.00	8	5.9
	40.00	3	2.5
	Total		118

Increase the number of CSs are associated with increase the risk of PP or PA, 39.1% of PW with former one scar have previa of placenta, whereas 14.5% were have abruption of placenta, 75% with former two scar were have previa of placenta and 25% were have abruption of placenta as p-value was 0.000 (significance). Table (2) show the number of CSs of the PW.

**TABLE 2.** Number of CS

		Frequency	Percent
Valid	1.00	109	92.4
	2.00	9	6.8
	4.00	1	.7
Total		119	100.0

There is not association between the interval between subsequent pregnancy and the of previa of placenta and abruption risk in next pregnancy as p-value was 0.5 (not significant). TABLE (3) show the interval between subsequent pregnancy calculated in months.

**TABLE 3.** Interval Between Subsequent Pregnancy in months

	Frequency	Percent
Valid 2.00	2	1.7
4.00	2	1.7
6.00	9	7.6
7.00	3	2.5
8.00	11	9.2
9.00	7	5.9
11.00	5	4.2
12.00	38	31.9
18.00	5	4.2
24.00	21	17.6
30.00	1	.8
36.00	10	8.4
42.00	1	.8
48.00	2	1.7
60.00	2	1.7
Total	119	100.0

Poor antenatal care visits are associated with increase the risk as p-value was 0.01 (significant). TABLE (4) show the number of antenatal care visits.

**TABLE 4.** Antenatal Number of Carefulness Visits

	Frequency	Percent
Valid 0	23	19.3
< 4	61	51.3
>= 4	35	29.4
Total	119	100.0

The socioeconomic status of the patient has association with the risk of complications as p-value was 0.015 (significant). Table (5) shows the socioeconomic status of the PW.

**TABLE 5.** Socioeconomic Status

	Frequency	Percent
Valid Low	9	7.6
medium	84	59.0
High	26	33.4
Total	119	100.0

**TABLE 6.** Patient Character

	Frequency	Percent
Valid normal	51	42.0
previa of placenta	39	31.2

abruption placenta	of	29	26.9
Total		119	100.0

There is significant association with the history of miscarriage and the occurrence of PP or PA in next pregnancy as p-value was 0.005 (significant). Table (7) show the number of miscarriages of these PW.

**TABLE 7.** Number of Miscarriage

	Frequency	Percent
Valid .00	74	65.6
1.00	36	26.9
2.00	6	5.1
3.00	2	1.6
4.00	1	.8
Total	119	100.0

Ethical considerations: The protocol of study was ratified via Gynecology and Obstetrics Department, College of Medicine, University of Wasit.

Hospital administration office agreement was gained. Verbal women consent as all was gained prior to participation.

#### 4. Conclusions

- The risk for previa of placenta and abruption is high when maternal age is increased.
- The risk for previa of placenta and abruption is high in PW with history of abortion.
- The risk for previa of placenta and abruption is high in case of poor antenatal care visit.
- The risk for previa of placenta and abruption is high in PW with low socioeconomic status.
- The risk for previa of placenta and abruption is high in the subsequent pregnancy after c/s delivery at first
- The risk for previa of placenta and abruption is more high with increase the number of c/s scars.
- Dilatation and curettage: damage of endometrium or the myometrium may be factor in implantation of placenta in the lower uterine segment. (19).
- Mothers with previa of placenta have a ten-fold risk of repetition at subsequent pregnancies (5).
- Multiple gestation occurs because of the larger surface of placenta or because of the risk factor that led to the development of multiple gestation as: increase mother age, family history (5).
- Former c/s birth: there is a strong associated between former c/s and risk of subsequent development of previa of placenta (18).
- Women who had former pregnancies have excess risk of PP (5).

#### 5. Recommendation

- Decrease the number of elective c/s if there is no medical indication.
- Patient with history of former previa of placenta or abruption should be followed carefully on routine ultrasound.
- Provide good antenatal care center to identify the PW with risk factor and when to intervene.

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