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Research Article

## RATE OF OCCURRENCE OF ABRUPTIO PLACENTA AND ASSOCIATED FETO-MATERNAL OUTCOME

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**Abstract:**

**Objective:** This research work aimed to find out the rate of occurrence of abruptio placenta (AP) and associated feto-maternal outcomes in Jinnah Hospital, Lahore.

**Methodology:** This prospective research work carried out at Department of Gynecology of Jinnah Hospital, Lahore for a duration of complete one year from January 2019 to December 2019. All the patients with confirmed diagnosis of AP and present with age of gestation of greater than twenty four weeks got inclusion in this research work. The collection of the information carried out on the well-organized questionnaire after taking the written consent from the patients. The analysis of the results carried out with the calculation of the variables in percentages.

**Results:** Total amount of the females who gave birth in the duration of this research work was 2132. AP was present in 3.90% (n: 84) patients. Most of the females 51.10% (n: 43) were present in the age group of 25 to 30 years. The prevalence of this complication was high in multiparous females as 86.90% (n: 73). Seventy percent (n: 59) females were suffering from anemia. HTN (Hypertension) induced by pregnancy was present in 7.0% (n: 6) patients, DM (Diabetes Mellitus) in 6.0% (n: 5) patients and multiple pregnancy in 5.0% (n: 4) patients. There was presence of no risk factor in 12.0% (n: 10) females. With respect to delivery mode, 74.0% (n: 62) females delivered spontaneously through vagina and 25.0% (n: 21) females underwent CS (Cesarean Section). Only one patient met her death because of the severe state of anemia, shock and DIC (Disseminated Intra-vascular Coagulation). The most important maternal problem was hypovolumic shock in 25.0% (n: 21) patients, followed by hemorrhage after delivery in 13.0% (n: 11) patients, changed profile of coagulation in 7.0% (n: 6) patients and failure of kidneys in 2.30% (n: 2) patients. Total sixty two percent (n: 52) females gave birth to alive babies whereas there were thirty eight percent (n: 32) stillborn. Out of total fifty two alive babies, 2 infants died within seven days of birth because of prematurity. Overall rate of mortality of perinatal was 40.40%.

**Conclusion:** AP has a strong association with high rate of feto-maternal morbidity as well as mortality. To decrease the incidence of this complication, there should be evaluation of the various risk factors of AP before and after the pregnancy period.

**KEY WORDS:** AP, mortality, shock, complication, occurrence, association, coagulation, prematurity, kidneys, stillborn, hemorrhage.

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**INTRODUCTION:**

The abruption of placenta is the pre term separation of placenta from wall of uterine before delivery. There is unacknowledged reason of AP but a hypothesis proposes placental anomalies because of failure of secondary incursion of trophoblastic villi [1, 2]. There is occurrence of AP in 0.80% to 1.0% of all pregnancies [3-5] and 1.20% in twin pregnancies in the whole world [6]. Abruption of the placenta has association with the labor before term [7]. The prevalence of abruption is very high at twenty-four to twenty-six weeks of gestational age [8]. Various risk factors related with the abruption of placenta comprise past history of abruption, trauma, chronic HTN, DM, habit of cigarette smoking, use of cocaine, multi-parity, increased maternal age and polyhydramnios [9-13]. There are differences in the risk of abruption of placenta based on ethnicity according to various reports [14]. In one research work, placenta Previa was the important risk factor of AP [15].

This complication is very important cause of hemorrhage in 3<sup>rd</sup> trimester as well as perinatal mortality. The high rate of morbidity as well as mortality is the outcome of severe hemorrhage because of this complication. The morbidity and mortality of the fetal is because of the decreased surface area of placenta for the oxygenation [7]. Early diagnosis of the complication and prompt evacuation of the uterus is needed to decrease the high rate of morbidity as well as mortality [16]. Most common symptoms of the abruption are bleeding through vagina, pain in uterus and abdomen cavity, anomalies in contraction of uterine, premature labor, distress of fetal and fetal mortality [17, 18]. The rate of complication of fetal is very high and it includes prematurity, anemia and restriction in growth [17, 19].

**METHODOLOGY:**

This prospective research work carried out in Gynecology Department of Jinnah Hospital, Lahore for a duration of complete one year from January

2019 to December 2019. All the patients with confirmed diagnosis of the AP and having age of gestation of greater than twenty-four weeks got inclusion in this research work. The collection of the information carried out on a well-organized questionnaire after taking the written consent from all the patients. The information contained elaborate history comprising age of the female, gravidity, parity number, age of gestation, results of examinations, delivery mode and fetomaternal morbidity as well as mortality. We performed the diagnosis of AP on clinical grounds in the availability of pain in uterine, bleeding through vagina, and tenderness of uterine and hypertonic uterus.

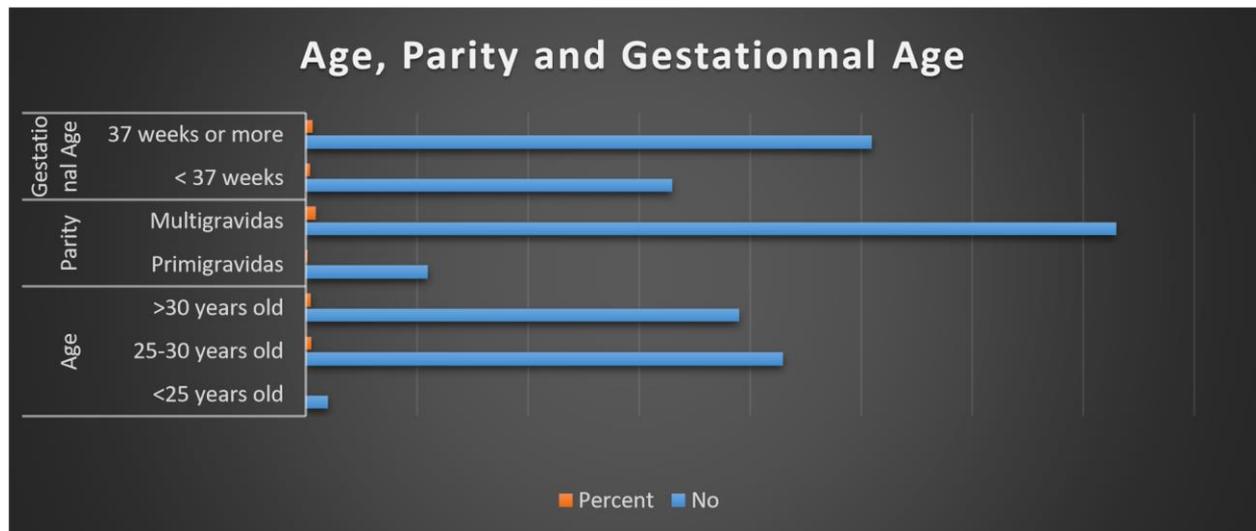
After getting complete history and thorough physical assessment, we performed various investigations which comprised complete picture of blood, grouping of blood, profile of coagulation, test of renal function, test for liver function, hepatic virology's screening, urinalysis and ultrasonography. There was confirmation of the diagnosis on the availability of the retro placental clot, which was in use to provide the estimation of the bleeding amount and abruption's severity. The management of the patients carried out in accordance with the fetomaternal condition. We gathered all the data on a Performa. The analysis of the results carried out with the calculation of percentages.

**RESULTS:**

There were total 2132 deliveries in the duration of this research work. Total 5.86% (n: 125) patients were suffering from ante-partum hemorrhage, among them 3.90% (n: 84) patients were present with placenta Previa. All the patients of this research work were not booked. Most of the females 51.10% (n: 43) were in age group of 25 to 30 years. Total 46.40% (n: 39) females were present with greater than thirty years of age and only 2.30% (n: 2) females were present with less than twenty five year of age (Table-1).

**Table-I: Age, parity and gestational age of the patients.**

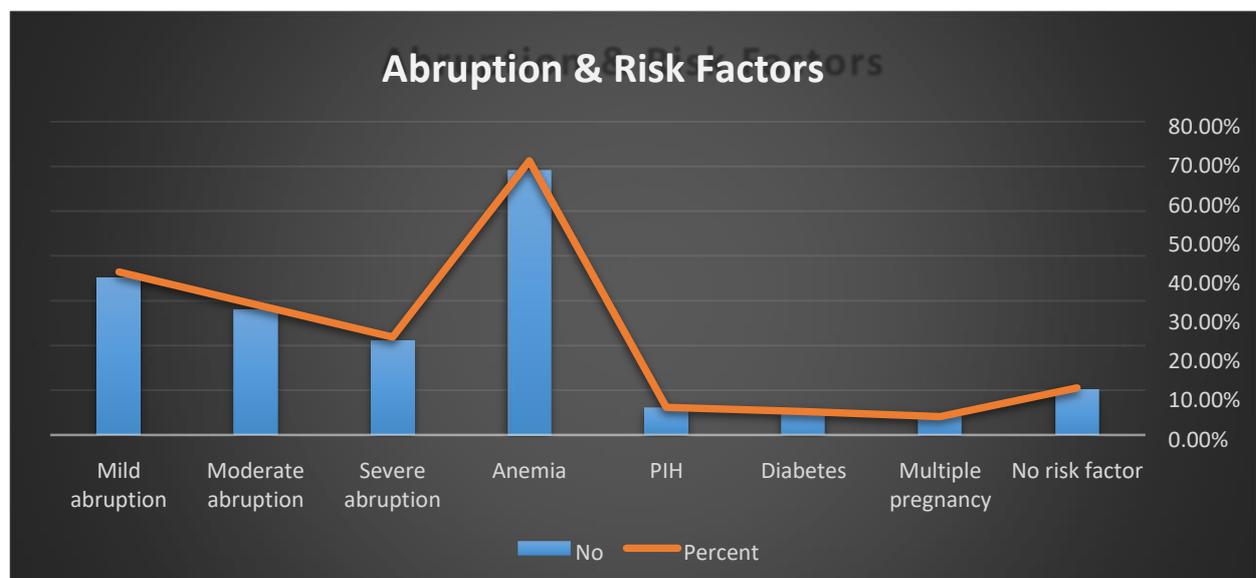
Characteristics		No	Percent
Age	<25 years old	2.0	2.3%
	25-30 years old	43.0	51.10%
	>30 years old	39.0	46.40%
Parity	Primi-gravidas	11.0	13.00%
	Multigravidas	73.0	86.90%
Gestational Age	< 37 weeks	33.0	39.20%
	37 weeks or more	51.0	60.70%



The incidence of this complication was high among multiparous as 86.90% (n: 73), whereas 13.0% (n: 11) patients were primi-gravida. Importantly, abruption was present in females with term pregnancy as in 60.70% (n: 51) and total 39.20% (n: 33) females delivered preterm. Among total eighty four females with abruption, 41.60% (n: 35) females had mild, 33.30% (n: 28) females were present with moderate and 25.0% (n: 21) females were present with abruption of severe nature (Table-2).

**Table-II: Severity of Abruption and Risk Factors.**

Risk Factors	No	Percent
Mild abruption	35.0	41.60%
Moderate abruption	28.0	33.30%
Severe abruption	21.0	25.00%
Anemia	59.0	70.00%
PIH	6.0	7.00%
Diabetes	5.0	6.00%
Multiple pregnancy	4.0	4.70%
No risk factor	10.0	12.00%



There was presence of anemia in 70.0% (n: 59) females. HTN induced by pregnancy was present 7.0% (n: 6) females, DM in 6.0% (n: 5) females, multiple pregnancy in 5.0% (n: 4) females, whereas 12.0% (n: 10) females were present without any risk factor (Table-2). Severe anemia with level of hemoglobin of lower than 7.0 gm/dl

was available in 37.30% (n: 22) out of total fifty nine females with anemia, 15.0% (n: 9) were suffering from moderate anemia with level of hemoglobin from 7.0 to 10.0 gm/dl, whereas 47.50% (n: 28) patients were suffering from anemia of mild nature with level of hemoglobin from 10.0 to 10.90 gm/dl. Total 74.0% (n: 62) females delivered through vagina and 25.0% (n: 21) patients underwent CS. One patient died in this process because of severe anemia DIC and shock. The most important maternal problem was hypovolumic shock in 25.0% (n: 21) patients, followed by hemorrhage after delivery in 13.0% (n: 11) patients, changed profile of coagulation in 7.0% (n: 6) patients and failure of kidneys in 2.30% (n: 2) patients. Total sixty two percent (n: 52) females gave birth to alive babies whereas there were thirty eight percent (n: 32) stillborn. Out of total fifty two alive babies, 2 infants died within seven days of birth because of prematurity. Overall rate of mortality of perinatal was 40.40%.

### DISCUSSION:

The rate of occurrence of AP as discovered in this research work is comparable with the incidence rate as discovered in various other research works [20]. Most of the patients were from non-urban areas and multiparous with enhanced age [15, 20-22]. This research work found an association of this complication with DM and HTN which is also evident from various other research works [22-25]. Many other research works put light on the association of anemia and DM with the prevalence of abruption of placenta [20, 26]. Sharif & Manther in their research work compared fifty hypertensive and one hundred and four normotensive participants with abruption and stated that there was increased incidence of abruption among females suffering from HTN [27]. Majority of the females of this research work delivered through vagina and CS was carried out in the patients with severe abruption. This finding is also similar with the outcome of other research works [16, 20, and 21]. Shock was the most common complication and this finding is comparable with the result of the research work conducted by Pitaphorm in which Shock was the leading complication [28]. The mortality rate of fetal is very high which is also comparable with the findings of other research works [27, 29].

### CONCLUSION:

There is strong association of AP with fetomaternal morbidity as well as mortality. It is need to evaluate the various risk factors associated with AP to decrease the rate of incidence of placental abruption.

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