STUDY ON FREQUENCY OF PLACENTA PREVIA AND MORBIDLY ADHERENT PLACENTA IN PATIENTS WITH PREVIOUS CESAREAN SECTIONS

ABSTRACT

Objective: To determine the incidence of different positions of placenta previa and morbidly adherent placenta in women who had previous multiple cesarean section reporting at Department of Gynecology and Obstetrics, Isra University Hospital.

Patients and Method: This cross sectional was done at department of Gyne/Obs and department of Radiology ISRA University Hospital Hyderabad during one year.

An informed consent was taken from pregnant women during antenatal diagnosed to have placenta previa or morbidly adherent placenta on ultrasound with history of previous C-section. The clinical / abdominal examination was done and proformas were filled, the location of placenta previa and morbid adherence was confirmed during C-section and observations were recorded for results. Data was collected via study proforma and analysis of data was done by using SPSS version 26.

Results: The total number of pregnant patients with repeat cesarean section was 100, out of which 22 (22%) cases were found to have placenta previa. Type 1 placenta Previa was present in (2) patient, (2) patient had Type 2, (2) patients had Type 3 and (16) were Type 4 placenta previa. 11 pts had morbidly adherent placenta. Out of 11 patient 4% were placenta accrete, 4% placenta percreta. Least common was placenta increta which was present in 3% cases. These cases were diagnosed on ultrasound during antenatal and confirmed on naked eye during surgery.

Conclusion: The present study 33% patients observed with placenta previa and morbidly adherent placenta in women who had previous multiple cesarean section reporting at Department of Gynecology and Obstetrics, Isra University Hospital. The most common type was placenta acreta 4%, placenta percreta 4% and least common type was placenta increta 3%.

Key words: cesarean section, placenta previa, placenta acreta, placenta increta, placenta percreta.

INTRODUCTION

Cesarean section (CS) is a surgical procedure, in which incision is made in anterior abdominal wall and uterus to deliver the fetus.[1] This surgical procedure is a life-saving technique especially in certain conditions during pregnancy or during labour which stop the progression of the normal vaginal delivery of the fetus. As being a major surgical procedure, it has its own short- and long-term effects on mother and on future pregnancies.[2] Marked variation in the prevalence of Cesarean section is observed in various regions of the world, current figures show that 18.6% of births are through Cesarean sections ranging between 6%-27.2% in developing and developed countries.[3] A rise in Cesarean Section rates leads to rising concerns, research and debates in healthcare communities, scientists and

policy makers round the globe.[4] The rate of cesarean section deliveries in the United States of America was 20.8% (208/1000) in year 1997[5,6] and it increased to 31.9% (319/1000) in year 2018 Similarly the Cesarean sections rate is continuously rising in United Kingdom where the rate increased from 19.7% in the year 2000 to 26.2% in year 2015 that is the highest figure in Western Europe [7]. The rate of Cesarean Section deliveries was reported to be 23.94% among Bangladesh [8]. The rate of Cesarean section deliveries in India are reported to range between 24% to 41% depending on public and private sector deliveries.[9] This rising Cesarean section rate brought the uterine scar prevalent in the obstetric population. As for as its rate in Pakistan is concerned 6.28% was in year 1991 while it was reported 15.8% during 2012-2013.[10] This increasing number of cesarean sections kept on increasing the rate of repeat Cesarean section in previously operated patients reaching about 50%. The evidence support that there is increased risk of complications with multiple cesarean sections which include adhesions uterine rupture, hemorrhage, bladder injury, placenta previa, acrreta, increta, percreta leading to hysterectomy.[6] Placenta Previa which is defined as obstetrical conditions in which the placental tissue lies in the lower segment close to or covering the internal Os of cervix uteri, its prevalence was reported to be 12%-38% in pregnancies with previous cesarean section in Pakistan.[11] Placenta Previa can further be divided into minor and major on the basis of covering the internal os. The obstetric complication of placenta previa occurs mostly in 2nd and 3rd trimesters of pregnancy resulting into morbidity as well as mortality in mothers and fetus[12,13]. Each cesarean section increases the risk of placenta Previa by 1.5-5 times reaching to 10%. About 3-9/1000 pregnancies are responsible for uterine bleeding as a major cause resulting into significant perinatal outcomes in the latter stages of gestation so potentially may end in life threatening emergencies requiring a management with multidisciplinary approach.[14.15] Women who have damaged myometrium by previous cesarean sections, D&C and any other scar in uterus are at a greater risk for placenta Previa. The early diagnostic value of placenta Previa well before the delivery is important so that, multidisciplinary approach can be planned to minimize the potential harm to the mothers and neonates. [16,17] The presence of MAP (morbidly adherent placenta) is considered a serious pregnancy complication that may be associated with massive and potentially life-threatening intrapartum and postpartum hemorrhage It has become the leading cause of emergency Obstetrics Hysterectomy. Maternal morbidity had been reported to occur in up to 60% and mortality in up to 7% of women with MAP. The strongest cause of accreta is placenta previa, when multiple prior caesarian sections are associated[18]. However, the risk associated with these factors has not been quantified on a population of females with previous caesarian sections visiting our institutional hospital. This study was done to estimate the frequency of Placenta Previa and morbidly adherent placenta in cases of previous cesarean sections reporting at the Department of Gynecology and Obstetrics, Isra University Hospital.

MATERIAL AND METHODS

This study cross-sectional study was done at department of Gynecology /Obstetric and department of Radiology ISRA University Hospital Hyderabad during one year. All pregnant women (>28 weeks of gestation and Singleton pregnancy) with history previous caesarian sections, age ≥ 18 years but < 40 years were included. All the pregnant patients with normally situated placenta, twin pregnancy and who were not agreeing to participate in the study were excluded. *A*fter taking informed consent from pregnant women or attendants who fulfill the inclusion criteria and admitted in Obstetric unit of Isra University Hospital Hyderabad were recruited. The data was entered in the preforma, detailed history was taken regarding age, parity, duration of gestation and complaints suggestive of Placenta previa, history was asked regarding Cesarean sections and abdominal examination was conducted. Routine laboratory investigations were ordered along with Ultrasonography. Data was analysis on SPSS 26 version.

RESULT

The mean of the patients was 29.31±5.17years. Majority of the women were from the Hyderabad city 57(57.6%) while 43(42.4%) were from the rural areas of Sindh. women with 2 gravida were in majority research 34 (34.3%). Most of the study participating women gave the history of Cesarean sections during previous deliveries 87(87%) while only 13(13%) women reported to deliver through NVDs (normal vaginal deliveries) as well as cesarean section previously as shown in table.1

Out of all 33% patients observed with placenta previa and morbidly adherent placenta in women who had previous multiple cesarean section, particularly as most common type was placenta acreta 4%, placenta percreta 4% and least common type was placenta increta 3%. Fig:1
Incidence of the placenta previa and morbidly adherent placenta in women who had previous multiple cesarean section was statistically insignificant according number of c-sections (p-0.39). Table.2

Table.1 Demographic characteristics of the patients n=100

Variables		Frequency (%)
Age (mean+SD)		29.31±5.17years
Residential status	Urban	57(57.0%)
	Rural	43(43.0%)
Gravidity	Gravida 1	2(2.0%)
	2	34(34.0%)
	3	25(25.0%)
	4	21(21.0%)
	5	8(8.0%)
	6	6(6.0%)
	7	3(3.0%)
Types of previous deliveries	C-section	87(87.0%)
	NVD+ C-Section	13(13.0%)

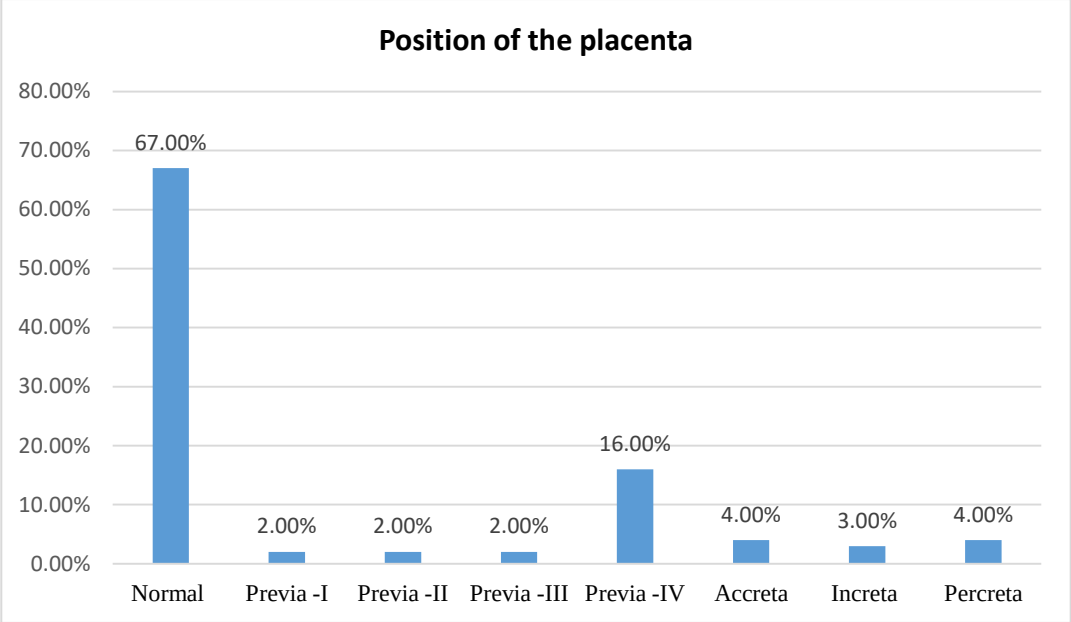

Fig:1 Position of the placenta n=100

Table.2 Placental position is respect to previous Cesarean Sections n=100

Position of the placenta	Previous C-Sections				Total	p-value
	1	2	3	4		
Normal	36	21	9	1	67	0.39
Previa_I	2	0	0	0	2	
Previa_II	1	1	0	0	2	
Previa_III	1	1	0	0	2	
Previa_IV	8	4	3	1	16	
Accreta	2	0	1	1	4	
Increta	1	0	1	1	3	
Percreta	0	2	2	0	4	
Total	51	29	16	4	100	

DISCUSSION

The mean age reported by them was 20 years which is consistent to our study mean age 29.31±5.17 years.[19] Most of the study women belonged to urban area Hyderabad city 57.6% and that is consistent to Mumtaz et al[20] who also reported urban 71% dominancy on rural subjects 29%.[74] In this study females with 2 gravida were 34(34.3%) and that of gravida 3 were 25 (25.3%) and this is consistent with Nankali, A et al[19] reported the gravida 2-3 as76.5% (75 cases) while gravida 2-3Women. On other hand Parity 1 was reported 15.5%, parity 2-3 was declared 30.4%, parity 4-6 was 33.6%, parity 7 and more was 20.4% by Mumtaz et al[74] and that was not in accordance with our results.[20].

Placenta seen normal in 69.7% of our study patients, 38.4% were from 1previous cesarean section, 21.2% were having 2 cesarean sections previously, 9.1% patients had 3 cesarean sections previously and 1.01% patient with 4 previous cesarean sections that was consistent with previous study showing normal placenta as dominant form 44.9% as anterior and 55.1% as posterior however anterior was in 34.34% patients and posterior was in 33.33% patients and lateral in 2.02% patients of our study. Placenta Previa was found in 20.2% of females, 10.1% from 1 previous cesarean section, 6.1% from 2 previous cesarean sections, 3.0% women had 3 previous cesarean sections while 1.01% female of 4 cesarean sections group. Study by Nankali, A et al [19] found Placenta Previa as 48% in their subjects and distributed it as complete Previa, patients with low previa as 32.7%, marginal previa as 13.3% while partial type of placenta previa as 6% where as we found previa II in 2 patients, previa III in 2 patients and previa grade IV in 16 patients that fall into inconsistent category.

Nankali, A et al[19] observed placental abnormality as Accreta in 10.2%, as Increta in 9.2% and as Percreta in 12.2% while we found accreta as 4.04% in our subjects which were as 2.02% from 1 previous cesarean section, 1.01% from each 3 sections and 4 previous sections while we could not find any accreta in patients having 2 previous cesarean sections. Increta type of placenta we observed in 2.02% women among whole participants and found as1.01% from 1 previous cesarean section and 3 cesarean sections while placenta increta was not seen in any of 2 as well as 4 previous cesarean section patients. We found Placenta percreta in 4.04% females, 2.02% from 2 sections and 3 cesarean sections previously while patients of previous 1 and 4 cesarean sections had no percreta. The difference was non- significant among various cesarean sections categories regarding position of placenta (p-0.39).

The current results by us represent previa II as 2.02% previa II as 2.02% and previa IV as 16.1% that not in accordance with the published studies previously.[21,22] According to previous published studies 23.5% and 60% females were having gravida >3 and >5 respectively where as we observed these proportion as 25.1% and 8.1% respectively that is inconsistent to them.[19,23] Abortion rate was described 26.5% and higher by authors in past in patients of placenta previa but this was not our parameter of study so we could not generate any data on this.[24.25] Majeed T et al in their research published Previa major in 77.19% (88 cases) while previa minor in22.80% (26 cases), Gravida 2-4 were in majority 67 (58.77%),3 previous cesarean sections were 29 (37.66%), age range 26-30 were most common 54 (47.36%) that is partially consistent and partially inconsistent to our results[26].

Gargari et al (2016) in their 7 year survey of 112868 deliveries found Placenta previa in 771 women at a prevalence 0.7% which is falling in contrast to our results.[27] Another work by Yazdani Tet al on122 pregnancies having previously undergone

cesarean section surgeries reported 19 (15.5%) cases of placenta Previa was that consistent to our results? While 23.3 % (14) patients were reported by Akram H et al to have placenta previa on their research on 60 females with history of cesarean section in past[29]. Our figures for placentaaccreta are lower than those 90/10,000 as reported by an Israel study (310 casesbased study). [30] Study by Silver RM et al (2006) conducted in Israel reported a much higher incidence of placenta accreta in previously operated women for caesarean sections that is inconsistent to current results by us [31]. Kollmann et al (2016) reported from results he found in his study women that the aged 35 and above 2 parity are more prone P. previa [32].There are much differences in the published data from various nations due to diverse nature of the factors that influence the condition. A Mozambique study also revealed a similar observation that cesarean sections are less observed in poor and rural area women and that is advantageous for them in terms of less frequent complications. Perez-Delboy A etal(2014) noted a rise in placental abnormalities with rise in cesarean sections that is also parallel to what we found.[33]

CONCLUSION: The present study concluded that in patient with repeat cesarean section the placenta previa and morbidly adherent placenta are very common. The total placenta previa were 33% and in which Morbidly adherent placenta, The most common type was placenta acreta 4%, placenta percreta 4% and least common type was placenta increta 3%. By decreasing the number of cesarean section and promoting normal vaginal delivery, the chance of morbid adherent placenta can be decreased.

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