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Research Article

## PLACENTA ACCRETA SPECTRUM AND OBSTETRIC HYSTRECTOMIES IN RELATION TO INCREASING CESAREAN SECTION

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**Abstract:**

**Background and objectives:** Placenta accreta spectrum (PAS), first described in 1937, refers to the pathologic invasion of the placental trophoblasts to the myometrium and beyond, which was formerly known as morbidly adherent placenta. The main objective of the study is to analyse the placenta accreta spectrum and obstetric hystrectomies in relation to increasing cesarean section. **Material and methods:** This descriptive study was conducted in Rawalpindi medical University during June 2019 to March 2020. The data was collected with the permission of ethical committee of hospital. Examination of the clinical record was used to determine if placenta accreta was suspected before delivery. **Results:** The data was collected from 102 patients. The mean age of the patients was  $32.8 \pm 4.3$  years. The mean duration of leaving the placenta in place was  $54.4 \pm 11.7$  days (range 32–72 days). All cases in which the placenta left in place underwent elective laparotomy later on to remove the placenta. **Conclusion:** It is concluded that women with PAS disorders who completed their family should be offered cesarean hysterectomy.

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**INTRODUCTION:**

Placenta accreta spectrum (PAS), first described in 1937, refers to the pathologic invasion of the placental trophoblasts to the myometrium and beyond, which was formerly known as morbidly adherent placenta with subtypes described as accreta (adheres to the myometrium), increta (invades deep to the myometrium) and percreta. The risk of morbidity due to cesarean section generally increases with the number of cesarean sections, as do the incidence of scar dehiscence, adhesion formation, placental problems, and bladder injury [1].

Although not life threatening, multiple repeat cesarean sections are associated with higher risks of adhesion occurrence, higher number of blood transfusions, and increased operation time and length of hospital stay; despite all that, there is no remarkable difference in serious morbidity associated with multiple repeat cesarean sections [2]. It is necessary for the physician and the patient to be aware of maternal morbidity associated with multiple cesarean sections. The long-term complications associated with the cesarean section should be discussed with the patients in the first and subsequent pregnancies [3].

Placenta accreta spectrum (PAS) disorders have become a significant life-threatening obstetrical issue due to its increased incidence from 0.12 to 0.31% in the last 30 years and the reported mortality rate of approximately 7.0% [4]. In addition, it is related to considerable maternal morbidity which includes massive blood transfusion, urinary tract injury, hysterectomy, admission to intensive care unit (ICU) admission, sepsis, and long hospital stay. The term PAS refers to variable degrees of adherence and invasion of the uterus and / or surrounding organs by the placenta, i.e. placenta accreta, increta and percreta which obstruct the placental separation at delivery and could consequently result in considerable maternal hemorrhage that menace the life of both the mother and the neonate [5]. Recently, several studies have tried to identify the risk factors for PAS disorders, it

has been reported that maternal age ( $\geq 35$  years) and placenta previa were significantly associated with the development of PAS disorders [6].

The main objective of the study is to analyse the placenta accreta spectrum and obstetric hysterectomies in relation to increasing cesarean section.

**MATERIAL AND METHODS:**

This descriptive study was conducted in Rawalpindi medical University during June 2019 to March 2020. The data was collected with the permission of ethical committee of hospital. Examination of the clinical record was used to determine if placenta accreta was suspected before delivery but also to recover all the maternal variables including number of pregnancies, number of previous cesarean deliveries, history of previous uterine curettage, gestational age, concurrent placenta previa, history of preeclampsia, eclampsia, chronic hypertension, gestational diabetes, diabetes mellitus, pulmonary disease, cardiac disease, maternal mortality and Apgar scores at 1, 5 and 10 minutes. The paraclinical examinations used could be found in the medical file. The operative report allowed us to recover the surgery performed but also the type of anesthesia used. The number of units and type of blood components (RBC, FFP or platelets) used intraoperatively and 48 hours postoperatively were also recorded. Intraoperative photographs were retrieved from the database of hospital.

The data was collected and analysed using SPP 17.

**RESULTS:**

The data was collected from 102 patients. The mean age of the patients was  $32.8 \pm 4.3$  years. The mean duration of leaving the placenta in place was  $54.4 \pm 11.7$  days (range 32–72 days). All cases in which the placenta left in place underwent elective laparotomy later on to remove the placenta. Vaginal route was tried in three cases but was not successful and conversion to laparotomy needed. The placenta was removed successfully in 14 cases out of 16 (87.5%) while two cases had delayed hysterectomy.

**Table 01:** Baseline characteristics

Variable		Frequency	P-value
Age, mean $\pm$ SD (range)		$32.8 \pm 4.3$	0.429
Parity	1–2	25 (54.2%)	< 0.001
	3–4	21 (45.8%)	
	$\geq 5$	1	
Previous CS	1	11 (20.8%)	< 0.001
	2	17 (37.5%)	
	3	17 (37.5%)	
	4	1 (4.2%)	
History of placenta previa	Yes	14 (31.2%)	0.035
	No	22 (68.8%)	

**Table 02:** Laboratory findings and postoperative morbidities

Variable	Variables	P-value
Pre op. Hb (g/dl)	12.3 ± 0.3	0.665 <sup>NS</sup>
Post op. Hb (g/dl)	8.5 ± 0.4	0.045
Decrease in Hb (%)	14.7 ± 3.8	0.04
Blood transfusion (units)	3.8 <sup>a</sup> ± 1.2	0.019
Mean duration of hospital stay (days)	6.5 ± 1.7	< 0.001

**DISCUSSION:**

It is still difficult to accurately assess the frequency of placenta accreta. Indeed, their incidence varies considerably according to the studies, the period studied and also according to the definition given to placenta accreta: some teams only accept the diagnosis in case of pathological evidence [6]. In addition, in case of conservative treatment it is always difficult to provide this histological evidence. During the period of our study i.e. one year, we have confirmed six cases of placenta accreta on 34947 births in the maternity Souissi Rabat which gives us an incidence rate of 1/5824 or 0.017%. Our incidence rate remains very low compared to data from the literature [7]. In 2017, the first national and binational case-control study of placenta accreta in Australia and New Zealand found an incidence rate of 44.2/100000 women given birth or 0.0442%. The most cited epidemiological study is that of Miller *et al.* who found in the United States over a period of 10 years (1985-1994) 62 placentas accreta on 155 670 births with an incidence rate of 1/2 510 births or 0.0398% [8]. This lower incidence in Morocco can be explained by the fact that screening is more effective in developed countries than in low- and middle-income countries. The only certainty is that the incidence of placenta accreta has increased dramatically in a few decades, and it was shown that this was likely correlated to the increasing rate of cesarean delivery [9]. Furthermore, the widespread use of ultrasound including looking for signs of placental accretisation in patients with a scarred uterus, alone represents an essential factor in the increased incidence of this disease. This trend is not expected to change in the coming years given the current obstetrical practices regarding cesarean indications such as breech presentation, twin pregnancies and scarred uteri. This is why it is important to identify women at risk in order to establish an appropriate management [10].

**CONCLUSION:**

It is concluded that women with PAS disorders who completed their family should be offered cesarean hysterectomy. Using the cervix as a tamponade combined with bilateral uterine artery ligation appears to be a safe alternative to hysterectomy in patients with focal placenta accreta and low parity desiring future fertility.

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