

SONOGRAPHIC APPEARANCE OF THE UTERUS AFTER CONSERVATIVE MANAGEMENT OF PLACENTA ACCRETA

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INTRODUCTION

Today, a low-lying placenta previa and a surgical history of at least one prior uterine surgery, primarily a caesarean delivery (CD), are present in more than 95% of women who have been prenatally diagnosed with PAS. Up to 6% of pregnant women have the combination of a low-lying anterior placenta and prior uterine surgery at their 12-week ultrasound examination due to the rapid rise in CD rates around the world and the high prevalence of prior gynecologic surgery (myomectomy, uterine adhesiolysis, and septal resection).

It is well established that ultrasound in the second and third trimesters can detect PAS symptoms.

Outcomes improved when cases were managed by a multidisciplinary team in tertiary medical facilities with the required education and experience. Even with the best planning, medical professionals, and resources, bleeding can occasionally be fatal. PAS is among the most difficult obstetric conditions to treat and require utmost preparation.

The best strategy to avoid PAS is to decrease the rate of primary caesarean sections and consider the possibility of vaginal birth following the first caesarean delivery (VBAC).

The uterus undergoes physiological involution to revert to its pre-pregnancy state during the first 6 to 8 weeks after delivery. Although this can be difficult and uncomfortable, particularly in patients who have had caesarean deliveries, are obese, or have uterine myomas, the involution process can be assessed by palpating the fundal height. Ultrasonography (US) has substantially improved the examination of the postpartum uterus.

AIM OF THE WORK

The aim of this study was to assess the pattern of uterine involution after conservative management of placenta accreta and to detect by ultrasound any complications that might develop during this involution process as regards the following items:

Size of uterus, Cesarean scar sutures, Plication suture, cervical length, intrauterine and extra uterine hematomas and the relationship of the bladder to the uterus and the vascularity between them.

SUBJECTS AND METHODS

This was a prospective cohort study conducted on all female patients who underwent conservative management for placenta accreta (emergency or elective) over a period of six months from June 2021 to December 2021 at El-Shatby Maternity Hospital, Faculty of Medicine, University of Alexandria. 75 patients were included; all cases were placenta previa accreta.

The study population was tabulated in one group to show the involution changes that occurred during puerperium and was assessed by color Doppler ultrasound.

RESULTS

Table 1: Descriptive analysis of the studied cases as regards the measurement of the uterus postoperative.

Size of uterus	Postoperative ultrasound	
	immediately (2 – 5 days)	during puerperium
Width (cm)		
Min. – Max.	8.0 – 13.0	3.0 – 7.60
Mean ± SD.	10.49 ± 1.20	5.11 ± 0.90
Median (IQR)	10.50 (9.9 – 11.0)	5.0 (4.5 – 5.5)
Length (cm)		
Min. – Max.	6.80 – 13.0	4.20 – 8.70
Mean ± SD.	10.24 ± 1.49	6.74 ± 0.87
Median (IQR)	10.0 (9.0 – 11.0)	6.50 (6.20 – 7.20)
Uterine Volume (cm³)		
Min. – Max.	55.0 – 110.2	16.0 – 50.0
Mean ± SD.	81.32 ± 15.59	33.65 ± 9.96
Median (IQR)	80.10 (66.0 – 95.50)	35.0 (25.20 – 42.0)
Endometrial thickness (cm)		
Min. – Max.	0.70 – 2.50	0.70 – 2.50
Mean ± SD.	1.74 ± 0.48	1.72 ± 0.47
Median (IQR)	1.80 (1.40 – 2.15)	1.80 (1.40 – 2.10)
Cervical length (cm)		
Min. – Max.	1.60 – 4.0	2.0 – 4.0
Mean ± SD.	2.92 ± 0.57	3.27 ± 0.43
Median (IQR)	2.90 (2.6 – 3.2)	3.40 (3.0 – 3.5)
Scar to internal of distance (cm)		
Min. – Max.	2.50 – 3.70	1.0 – 1.0
Mean ± SD.	3.06 ± 0.36	1.49 ± 0.30

Table 2: Distribution of the studied cases as regards postoperative findings by ultrasound (n=75).

	Postoperative ultrasound		Postoperative ultrasound	
	immediately (2 – 5 days)		during puerperium	
	No.	%	No.	%
Intrauterine finding				
Blood	30	40	21	28.0
Empty	45	60.0	54	72.0
Position				
AVF	45	60	61	81.3
RVF	10	13.3	2	2.7
Erect	20	26.6	12	16.0
New finding				
No	–	–	47	62.7
Defect	–	–	28	37.3
Placation sutures				
Absent	55	73.3	–	–
Present	20	26.7	–	–

Table 3: Distribution of the studied cases as regards postoperative complications by ultrasound (n = 75).

	Complication	Postoperative ultrasound		Postoperative ultrasound	
		immediately (2 – 5 days)		during puerperium	
		No.	%	No.	%
Scar Hematoma	Site				
	No	31	41.3	62	82.7
	Anterior	34	45.3	12	16
	Posterior	10	13.3	1	1.3
	Size (cm)	(n = 44)		(n = 13)	
	Min. – Max.	1.0 – 6.0		0.0 – 3.50	
Mean ± SD.	3.36 ± 1.25		0.96 ± 0.85		
Median (IQR)	3.0 (3.0 – 4.2)		1.0 (0.50 – 1.0)		
Parietal wall Hematoma	Absent or present				
	No	65	86.7	–	–
	Yes	10	13.3	–	–
	Size (cm)	(n = 20)			
	Min. – Max.	2.0 – 5.50		–	
	Mean ± SD.	3.89 ± 0.95		–	
Median (IQR)	4.0 (3.0 – 4.65)		–		
Bladder flap Hematoma	Absent or present				
	No	65	86.7	–	–
	Yes	10	13.3	–	–
	Size (cm)	(n = 10)			
	Min. – Max.	1.0 – 3.20		–	
	Mean ± SD.	2.24 ± 0.71		–	
Median (IQR)	2.25 (1.80 – 2.80)		–		

CONCLUSION

1. Previous caesarean deliveries and uterine surgeries are the most important risk factors for placenta accreta.
2. Placenta accreta cases should be managed at tertiary care centers with placenta accreta specialties and with MDT.
3. The follow-up of cases that underwent conservative management is mandatory to detect any complications and evaluate its impact on the uterus.
4. The involution process of the uterus after conservative management for PAS followed the normal physiological process, and most of the complications resolved by the end of puerperium.