

Favorable Outcomes from an OBGYN Hospitalist-Led Placenta Accreta Center Compared to Placenta Accreta Spectrum Centers of Excellence

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INTRODUCTION

- Placenta Accreta Spectrum (PAS) is a life-threatening obstetrical condition with high maternal morbidity and mortality rates.
- Over the course of the last four decades, the rate of cesarean has tripled and the incidence of PAS has had a 10-fold increase from 1/2000 to 1/200.
- PAS is one of the most challenging obstetric situations an obstetrician may face. Adverse effects may be related to extensive blood loss, disseminated intravascular coagulopathy (DIC), multiorgan failure, prolonged hospitalization, and death.
- Maternal morbidity and mortality can be reduced with early preoperative diagnosis, and with planned late preterm cesarean hysterectomy in a multidisciplinary center without attempting to remove the adherent placenta.
- A PAS team has historically consisted of a multidisciplinary team led by subspecialists: gynecologic oncologists, advanced pelvic surgeons, and/or Maternal-Fetal Medicine.
- Herein we propose new model has been proposed that expands upon an OBGYN-led team-based approach stratified by experience and surgical skill to manage surgically complex patients and reserving utilization of specialty for the most difficult and complex cases.

AIM

To evaluate the outcomes of patients with placenta accreta spectrum (PAS) managed by an OBGYN Hospitalist-led multidisciplinary team.

METHODS

- The study is a retrospective descriptive cohort study of patients managed by our Placenta Accreta and Complex Obstetrics Surgery (PACOS) team, an OBGYN hospitalist-led multidisciplinary team at a single tertiary care center from Jan 2024 to Dec 2025.
- Inclusion criteria: 53 patients were managed by the team, 49 of the patient with confirmed PAS. 4 patients were referred to the PAS team due to risk factors and were low-moderate risk of PAS; these patients were managed by cesarean section.
- Exclusion criteria: Patients with undiagnosed PAS and those not managed by the dedicated PAS team were excluded from the study.
- Patients are managed by a multi-disciplinary team led by experienced and surgically skilled OBGYN hospitalists. The team is supported by: MFM specialists, radiology, urology, gynecology oncology, anesthesiology, neonatology, and ancillary services.
- Patients are scheduled for a cesarean hysterectomy between 34-35 weeks with inpatient admission the night prior.
- Patients are surgically managed according to the Fernandez-Lense surgical technique (Figure 1).
- Data collection included demographic information (age, BMI, ethnicity), medical information (gestational age, gravity and parity, medical comorbidities, and prior uterine surgeries), and intraoperative data (procedure, length of procedure, intraoperative injury, need for interventional radiologic procedure, quantitative blood loss, need for and quantitation of blood transfusions), and postoperative data (intensive care unit admission, length of stay, and pathology grade).
- Severe morbidity and mortality (SMM) was considered as proposed by Einerson et al.
- Data was then compared to outcomes from PAS Centers of Excellence

RESULTS

- A total of 54 patients had care with the PAS team
- Mean age of the study cohort was 34.3 (range 25-43)
- 41 patients (77.4%) had a concurrent diagnosis of placenta previa
- 83% of patients had at least one prior cesarean section and 98.1% of patients had a prior uterine surgery (and 100% of the PAS cohort)
- Mean gestational age at delivery was 34.2 weeks, and 34.0 weeks specifically for patients with PAS.
- For patients that delivered prior to 34 weeks, the indications for delivery were preterm labor, preterm prelabor rupture of membranes and/or bleeding. The second-most common obstetric complication was hypertensive disorder of pregnancy.
- 58% of the patients (31/53) had FIGO Grade 2 (increta) or Grade 3 (percreta) PAS diagnosed on histopathology
- Cesarean hysterectomy (with cystoscopy, ureteral catheter placement, and salpingectomy) was performed for 43 patients (81%). Of the patients that did not have a hysterectomy, 4 patients were low risk for PAS and 6 patients had focal resection (11% of the patients).
- The length of procedure ranged from 52 to 236 minutes (mean of 130.5 min)
- Median QBL was 802 mL, Mean QBL was 1006 mL (range 118-6000 mL) with greater blood loss in the setting of PAS Grade 2-3 patients.
- 8 patients (15.1%) received a blood transfusion (average of 2.6 units per transfused patient). Of the 8 patients that were transfused, only one patient had FIGO Grade 1 diagnosis, the other 7 patients had FIGO Grade 2-3 diagnoses.
- There were no intra- or postoperative complications meeting criteria for severe morbidity and mortality. Two patients had incidental/intentional cystotomy. No patients required interventional radiologic procedures.
- There was only one (1.8%) admission to the ICU for 24 hours postoperative monitoring. One patient had a postoperative ileus which was managed medically and without TPN. One patient had a readmission for wound cellulitis that was also managed medically.
- The average length of stay was 3.5 days (range 2-6 days)

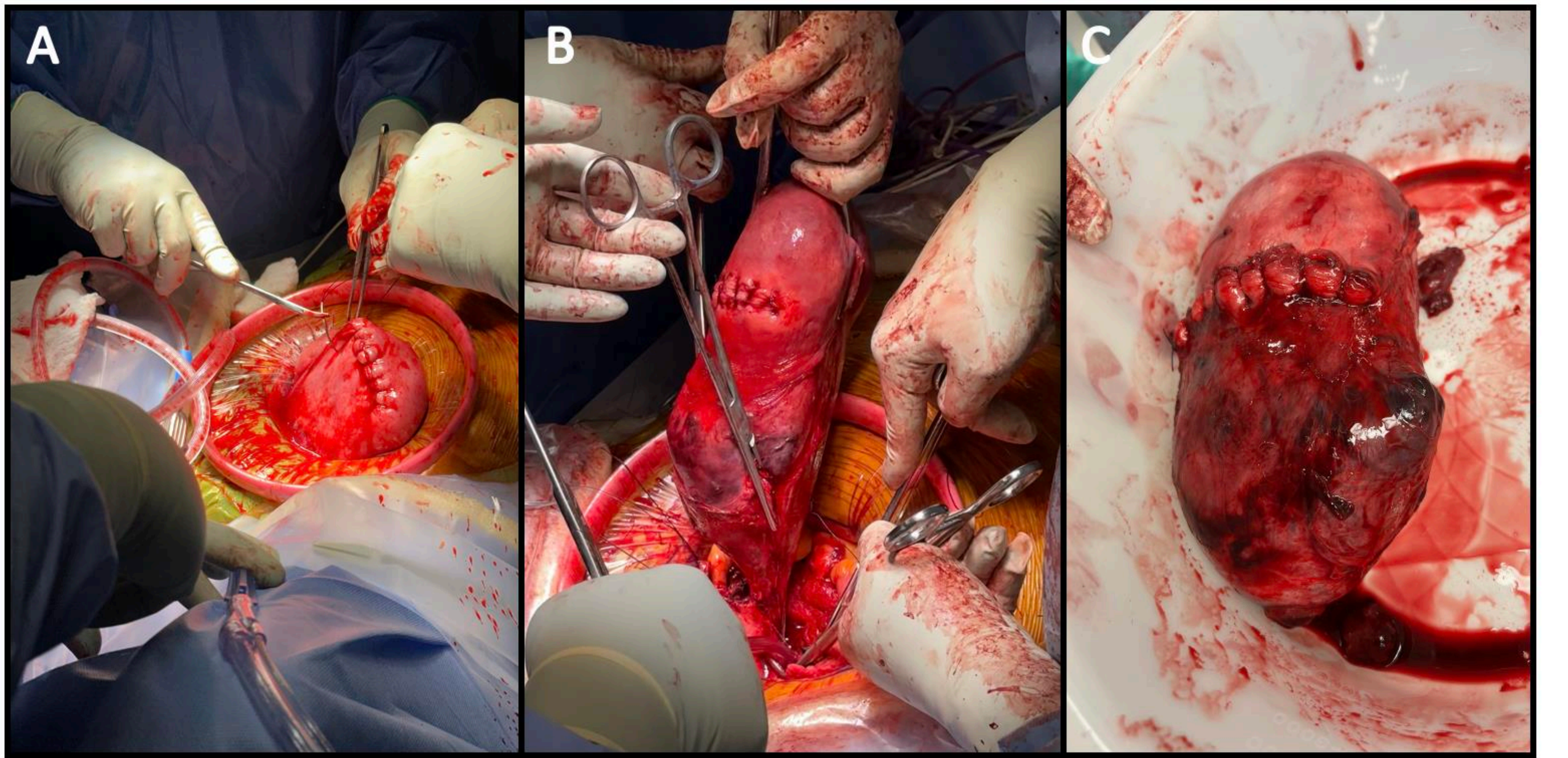
CONCLUSIONS

- Volume at our center is considered high (generally 10 cases or greater annually).
- Outcomes for the patients managed at our center, utilizing an OBGYN-hospitalist led approach and the Fernandez-Lense surgical technique are similar to what is reported in the literature for management in traditional settings, notably, without severe morbidity or mortality.
- We had favorable outcomes meeting or exceeding those published in the literature for patients undergoing care in specialized centers and PAS Centers of Excellence.
- Much of the morbidity associated with PAS occurs as a result of complications associated with hemorrhage. In our population, the mean QBL for all patients with PAS is within range for uncomplicated cesarean section at 1006 mL. Only 8 patients required blood transfusion and none required 8 units of pRBCs. The mean rate of transfusion for the 8 patients transfused was 2.6 units. The median blood transfusion rate for all patients was 0 units.
- Our review revealed significantly reduced hospital costs for PAS patients due to shorter operative times, less blood loss, less need for ancillary services including intensive care, fewer complications, and shorter length of hospital stay. This study underscores the importance of refining surgical protocols to optimize patient care.

Demographic, obstetrics outcomes data, pathology distribution, QBL, and morbidity and mortality outcomes for patient managed at our center and five PAS Centers of Excellence						
Study	AdventHealth Orlando	Bailit et al	Shamshiraz et al	Erfani et al	Hobson et al	Holmes et al
# of patients	N = 53	n = 158	n = 118	n = 189	n = 32	n = 45
Age	34.3 (range 25-42)	35	33	33	35	34.7
Gestational age at delivery (weeks)	34.2 (SD ± 2.4)	36.6 (34.1-38.6)	33.5	34	35.2	35
Race						
Hispanic	18 (33.9)	29 (18.4)				
Non-Hispanic black	8 (15.1)	28 (17.7)				
Non-Hispanic white	23 (43.4)	80 (50.6)				
Other	4 (7.6)	21 (13.3)				
Previous cesarean delivery (any)	34 (81)		105 (89)	170 (90)	Average of 2	
Number of prior cesarean deliveries						
0	9 (17)	59 (37.3)				2 (4.4)
1	12 (22.6)	37 (23.4)				16 (35)
2	16 (30.2)	34 (21.5)				18 (40)
3	9 (17)	28 (17.7)				9 (20)
4	6 (11.3)					
6	1 (1.8)					
Other risk factors:						
Any previous uterine surgery	52 (98.1)					19 (42.2)
Placenta previa	41 (77.4)	49 (31.0)	93 (78.8)	135 (74.6)	30 (93.8)	
Previa with prior cesarean	36 (67.9)					
Previous myomectomy	8 (15.1)			6 (3.2)	2 (6.3)	
In vitro fertilization	7 (13.2)					
Endometriosis	3 (5.7)					
History of endometrial ablation	1 (1.8)					
Comorbidities:						
Chronic hypertension	11 (20.8)					
Pregestational diabetes	3 (5.7)					
Obesity	31 (57.4)					
BMI	32.8 (IQR 2.7)	30.9		30	24.7	
Obstetric complications:						
Preterm labor	15 (28.3)					
Antepartum bleeding	22 (41.5)					
Hypertensive disorder of pregnancy	22 (41.5)					
Preterm rupture of membranes	9 (17)					
Fetal growth restriction	6 (11.3)					
Intrauterine infection	1 (1.8)					
Pathology						
FIGO Grade 1 (accreta)	18 (34)	112 (70.9)	Grade 1: 28 (23.7)	Grade 1: 64 (33.9)	25 (78.1)	14 (31.1)
FIGO Grade 2 (increta)	15 (28.3)	24 (15.2)		4 (12.5)	4 (12.5)	15 (33.3)
FIGO Grade 3 (percreta)	16 (30.2)	17 (10.8)	Grade 2/3: 90 (76.3)	Grade 2/3: 125 (66.1)	3 (9.4)	4 (8.9)
None*	4 (7.6)	5 (3.2)				12 (26.7)
QBL						
FIGO Grade 1	802 (median)	2000 (1100-2800)	1750	1700	1000	2500
FIGO Grade 2/3	867.6 (250-2437)					
	1133.8 (204-6000)					
Patients transfused	8 (15)		74 (62.7)		8 (25)	
ICU Admissions	1 (1.8)	49 (31)				18 (40)
Intraoperative Complications	2 (3.8)		44 (37.3)			
Postoperative Complications	2 (3.8)		5 (4.2)	7 (3.7)		

FIGO (International Federation of Gynecology and Obstetrics). Age is presented as mean years (range), gestational age as mean weeks (SD), all others data are expressed as n (%). *Four patients were managed with the PAS team but were low risk for PAS and were managed with cesarean only. QBL (quantitative blood loss). Data are expressed as n (%), QBL in milliliters (range).

- Outcomes at our center were favorable compared with those reported by PAS Centers of Excellence
- The distribution of pathologic severity at our center and those of three of the PAS Centers of Excellence had fairly equal proportions of PAS Grade 1, Grade 2, and Grade 3 pathology. In contrast, two PAS Centers of Excellence reported predominantly PAS Grade 1 Pathology (70-78%)
- Median QBL at our center was 802 mL. Median QBL reported by PAS Centers of Excellence ranged from 1000 mL to 2500 mL.
- Our center only had one ICU admission (1.8%). Two PAS Centers of Excellence reported their ICU admission rates of 31% (49 admissions) and 40% (18 admissions).
- Our center demonstrated an intraoperative complication rate of 3.8%, and the only PAS Center of Excellence that reported this outcome had an intraoperative complication rate of 37.3%.
- Postoperative complication rate at our center was 3.8% and postoperative complication rates at the PAS Centers of Excellence ranged from 3.7% to 4.2%.



The Fernandez-Lense Surgical Technique. A. Hysterotomy placement and re-approximation during cesarean hysterectomy. B. Creation of colpotomy during cesarean hysterectomy. C. Uterus and cervical specimen demonstrating high transverse uterine incision and findings consistent with FIGO Grade 3 PAS.

DISCUSSION

- This study is a retrospective descriptive cohort study of a relatively small volume of patients, which eliminates the ability to minimize potential confounding and bias.
- This study supports the work of Dr. Bob Silver, who suggests that “patients with PAS, managed by a multidisciplinary team in tertiary care centers are less likely to require large volume blood transfusion, undergo a second surgical procedure, or experience composite morbidity than those receiving standard obstetric care.”
- While traditional structure of PAS teams rely on subspecialty care, it is recognized that the specific credentials of the surgeon are likely less important than the surgeon’s experience with these complex case.
- Gynecologic oncology, general surgery and trauma surgery backup was not required for any of the cases. This study lends support to the proposal from Futterman, et al, to utilize OBGYN teams stratified by experience and surgical skill to manage these complex cases, thereby reducing the burden on subspecialty care.
- An additional advantage of the OBGYN-Hospitalist led program includes greater availability of skilled and confident providers for unplanned cases.

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