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Placenta Previa Accreta Spectrum During Labor: Can it lead to Hysterectomy?

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A B S T R A C T

Background: Placenta Previa Accreta Spectrum (PAS) is a serious obstetric condition that causes severe hemorrhage and an increased risk of hysterectomy. Early identification of risk factors and appropriate management strategies are essential to improve maternal outcomes.

Aims: To evaluate the incidence and risk factors associated with hysterectomy among patients with placenta previa accreta spectrum, assess maternal outcomes, and identify clinical management strategies that may reduce the need for hysterectomy.

Methods: A retrospective cohort study was conducted at Elsaid Hospital. Medical records of 105 women diagnosed with PAS (2017 and 2024) were reviewed. Data collected included age, parity, previous cesarean sections, antepartum hemorrhage, comorbidities, hemoglobin levels, blood transfusion requirements, surgical interventions, and maternal outcomes. Statistical analysis was performed using descriptive and inferential methods, with a significance level of $p < 0.05$.

Results: the overall incidence of PAS was 0.53 %. The incidence progressively increased over time. In 2017, PAS incidence was 0.39%, which then progressed to reach the highest incidence (1.06%) in 2024. The mean age of participants was 33.5 ± 5.1 years. The cohort had a high prevalence of multiple cesarean deliveries, with 62.5% having three or more previous cesarean sections. Antepartum hemorrhage and anemia were reported in 44.8% of cases each. Placenta previa accreta was associated with maternal morbidity, including increased blood transfusion requirements and a heightened risk of hysterectomy, particularly among women with multiple previous cesarean deliveries and severe obstetric complications. Maternal mortality was 0.95%.

Conclusion: PAS remains a major cause of maternal morbidity and mortality constitutes a primary indication for intrapartum hysterectomy. Previous cesarean sections, antepartum hemorrhage, and anemia are important risk factors associated with adverse maternal outcomes. Resorting to hysterectomy in cases of PAS should not be regarded as an inevitable sequela; early diagnosis and multidisciplinary management are essential to reduce complications and improve outcomes.

Keywords: *Placenta Accreta Spectrum, Hysterectomy, Maternal Outcome, Cesarean Section, Antepartum Hemorrhage*

1. Introduction

The most severe consequences of pregnancy are placental abnormalities, which greatly endanger both maternal and fetal health. Particularly when it manifests itself during labor, placenta previa accreta is among the most hazardous and life-threatening diseases. Placenta previa is the aberrant insertion of the placenta in the lower uterine sector, either partially or completely occluding the cervix. The hazards rise considerably when this disorder coexists with placenta accreta, an even more severe abnormality where the placenta invades and adheres excessively to the myometrium [1]. This disorder not only impedes typical labor and delivery, but also raises the risk of significant

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hemorrhage, hence necessitating urgent and even life-saving operations like hysterectomy. Placenta accreta spectrum (PAS) disorders encompass various types—including placenta accreta, increta, and percreta, each distinguished by the degree of placental invasion into the uterine wall and beyond [1]. Studies indicate that the chance of placenta accreta rises with advanced maternal age and several pregnancies [2]. The incidence of placenta accreta has increased from 1 in 30,000 pregnancies in the 1960s to 1 in 533 pregnancies in the 2000s [3]. The risk of placenta accreta increases with the number of prior cesarean sections, ranging from 0.3% in women with one previous cesarean delivery to 6.74% for women with five or more cesarean deliveries [4]. A recent systematic review and meta-analysis evaluating the association between previous non-cesarean uterine surgery and PAS showed that myomectomy, dilation and curettage (D&C), endometrial ablation, or uterine perforation increase the likelihood of abnormal placental implantation due to scarring and endometrial damage, significantly increasing the odds for development of PAS in subsequent pregnancies [5]. Placenta accreta can lead to premature birth [6]. To maximize neonatal maturation and reduce the risk of maternal bleeding, clinical consensus advises delivery between 34 and 36 weeks of gestation through cesarean hysterectomy [7]. There should be consideration for transfer to a tertiary center for delivery or to a Placenta Accreta Center of Excellence (PACE) before delivery [8]. The patient's hemoglobin should be optimized prior to delivery, and communication with the blood bank will help guarantee supplies are available when a significant transfusion becomes necessary [9]. Cesarean sections should be planned such that a simple transition to hysterectomy is possible if needed [9]. If not managed properly, placenta accreta can result in significant maternal morbidity and, in some cases, even mortality [10]. Aims: To evaluate the incidence and risk factors associated with hysterectomy among women with Placenta Previa Accreta Spectrum (PAS), assess maternal outcomes, and identify clinical management strategies that may reduce the need for hysterectomy and improve maternal outcome.

2. Methods

A retrospective cohort hospital record-based study was conducted on 105 cases with a confirmed diagnosis of PAS (via imaging or intraoperative findings) over an eight-year period (from January 2017 to December 2024). Data were collected from delivery records at Elsaid Hospital in Misurata, Libya. All cases in the study were operated on by a multidisciplinary team who already possessed expertise in the management of placenta accreta spectrum. All patients provided written informed consent for the operation. The collected data were analyzed using SPSS statistical software version 21, and a p-value equal to or less than 0.05 was considered statistically significant.

3. Results

Annual incidence of PAS showed variations throughout the study period, progressively increasing from 0.39% in 2017 to the highest incidence of 1.06% in 2024 (Table 1). This trend suggests a gradual increase in the incidence of PAS in recent years. The overall incidence of PAS over 8 years was 0.53% (out of 19873 total number of deliveries from 2017 to 2024 at ELSAID hospital).

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Table 1. Annual Incidence of Placenta Previa Accreta Spectrum

Year	Total Deliveries	PAS Cases	Incidence (%)
2017	3315	13	0.39
2018	3722	15	0.40
2019	3872	15	0.39
2020	2023	14	0.69
2021	1950	12	0.62
2022	2298	11	0.48
2023	1275	10	0.78
2024	1418	15	1.06

The participants' ages ranged from 18 to 41 years, with a mean age of 33.5 ± 5.1 years. The majority of women (81.0%) were within the 30–41-year age interval (Figure 1).

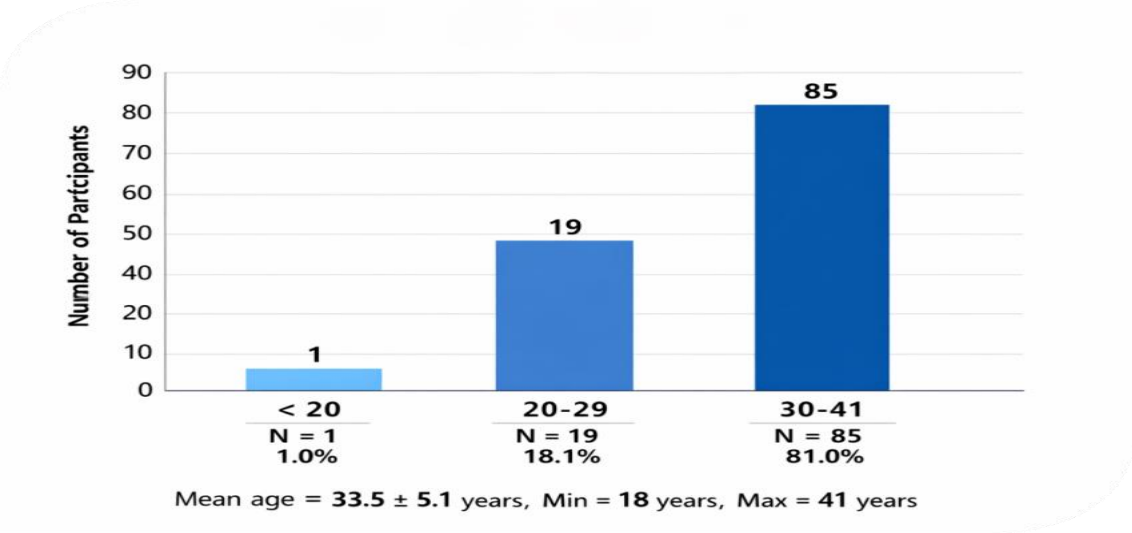


Figure 1. Distribution of the women with placenta previa accreta according to age.

The majority of patients (81.0%) fall within the 30–41-year age group, indicating advanced maternal age as a prevalent factor in this cohort. In regard to the gestational age, most women (85.7%) were classified as moderate to late preterm (32–37 weeks) at the time of delivery, while 7.6% were very preterm (28–<32 weeks) of gestation, and only 6.7% were term. (Table 2).

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Table 2. Distribution of patients with placenta previa accreta according to gestational age at time of cesarean section

Category of Gestational age / wks.	Number	Percentage (%)
Extreme preterm <28wk	0	0
Very preterm 28-<32	8	7.6
Moderate to late preterm 32-37	90	85.7
Term >37 week	7	6.7

Regarding parity, 47.6% were multiparous (2-4 deliveries) and 40.9% were grand multiparous (5 or more deliveries) (Table 3).

Table 3. Distribution of patients according to parity

Parity	Number	Percentage (%)
Nullipara	3	2.9
Primipara	9	8.6
Multipara	50	47.6
Grand multipara	43	40.9

A high prevalence of repeat cesarean deliveries was observed in the cohort: 37% of patients had four or more, while 31.4% had three (Table 4).

Table 4. Distribution of patients with placenta previa accreta according to history of cesarean section (CS)

Number of Cesarean sections	Number	Percentage (%)
No CS	1	0.9
One CS	11	10.5
Two CS	21	20.0
Three CS	33	31.4
Four or more CS	39	37.0

Prior non-cesarean surgical interventions included dilation and curettage in 36.2% of cases, myomectomy in 3.8%, and laparoscopy in 3.8% (Table 5).

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Table 5. Distribution of patients according to history of uterine surgery

Type of operation	Number	Percentage (%)
Dilatation and curettage	38	36.2
Myomectomy	4	3.8
Laparoscopy	4	3.8

Antepartum hemorrhage and antepartum anemia were major complications, each affecting 44.8% of the cohort (Table 6).

Table 6. Distribution of patients according to history of antepartum complication

Complication	Number	Percentage (%)
Antepartum hemorrhage	47	44.8
Antepartum anemia	47	44.8

Preoperative hemoglobin levels indicated that 49**.5%**of patients had normal levels, **25.7%** had moderate anemia, and **23.8%** had mild anemia. Only one case 0.95% of severe anemia was recorded. Postoperative, hemoglobin levels deteriorated significantly (P< 0.001) with mild anemia rising to 46.2% and moderate anemia to 31.0%. 22.0% were normal, while the number of severe cases remained unchanged. See Table7 for more details.

Table 7: Distribution of patient with placenta previa accreta according to hemoglobin before and after operation:

Hb(gm/dl)	HB Before (No., %)	HB After (No., %)
Severe anemia (<7)	1 (0.95)	1 (0.95)
Moderate anemia (7.0-9.9)	27 (25.7)	33 (31.4)
Mild anemia (10-10.9)	25 (23.8)	48 (45.7)
Normal (no anemia) ≥ 11.0	52 (49.5)	23 (21.9)
Total	105 (100)	105 (100)
Test significant	P= 0.00026	

Blood transfusion requirements during cesarean section for PAS ranged from 0 to 54 units. The vast majority of patients required at least 1-unit (96 patient,91.4%)). However, 27.5 units were used among extreme outliers, and 17.2% requiring massive transfusion of ≥ 10 units (See Table 8). The bulk of the patients (74.2%) fall within the 1 to 9-unit range. Specifically, the most frequent requirement was1-2 units (39%).

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Table 8. Distribution of patients according to number of blood transfusion units

Category	Transfusion units	Number of patients	Percentage (%)
No Transfusion	0 units	9	8.6
Low Requirement	1–2 units	41	39.0
Mild to Moderate Requirement	3–9 units	37	35.2
High/Massive Requirement	≥ 10 units	18	17.2
Total		105	100.0

The mean length of hospital stay was 4.3 ± 1.3 days (Table 9).

Table 9. Distribution of days of admission among placenta previa accreta cases

Days of hospital stay	Frequency	Percentage (%)
3-4 days	67	63.8
5-6 days	33	31.4
>7 days	5	4.8
Mean days of admission = 4.3 ± 1.3 days		

Surgical interventions included uterine reconstruction after manual removal of the placenta (69.5%), internal iliac artery ligation (22.9%), cesarean hysterectomy (3.8%), and B-Lynch suturing (3.8%) (Figure 2).

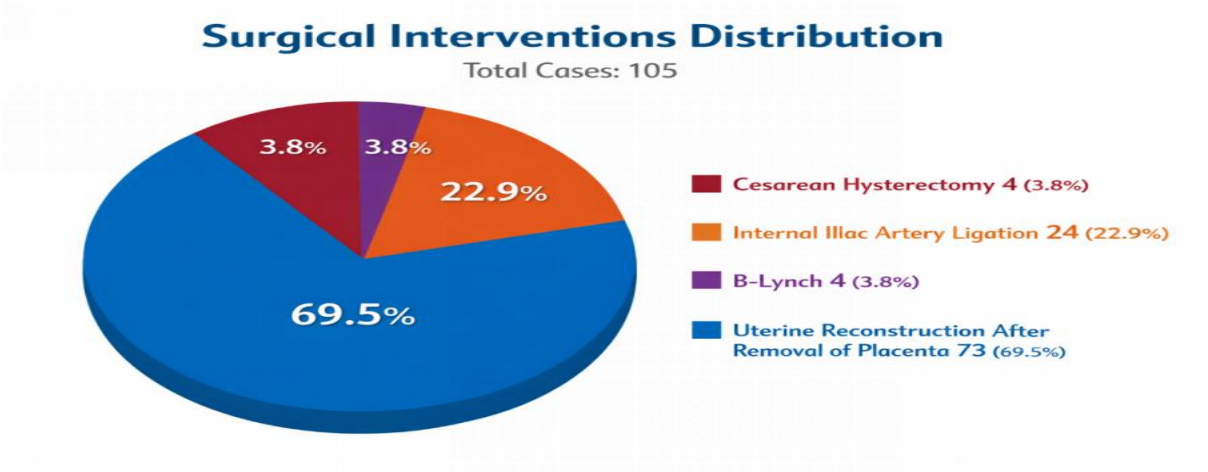


Figure 2. Surgical Interventions Distribution.

(Proportions of intrapartum surgical interventions showing uterine reconstruction was the most common approach (69.5%).

There were two cases of bladder injury (1.9%), no cases of bowel injury recorded and only one maternal mortality (0.95%), the overall maternal mortality rate from total number of deliveries through 8 years from 2017 to 2024(19873) was only (0.005) (Figure 3).

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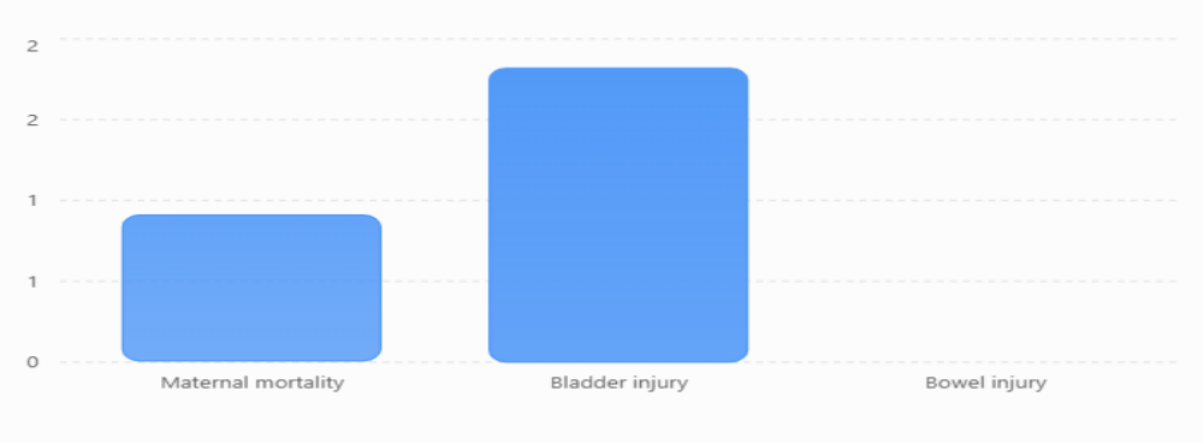


Figure 3. Incidence of maternal mortality and surgical complication.

(Maternal mortality (0.95%), bladder injury (1.9%), bowel injury (0.0%).

While complications like antepartum hemorrhage and anemia trended upward with maternal age (Figure 4).

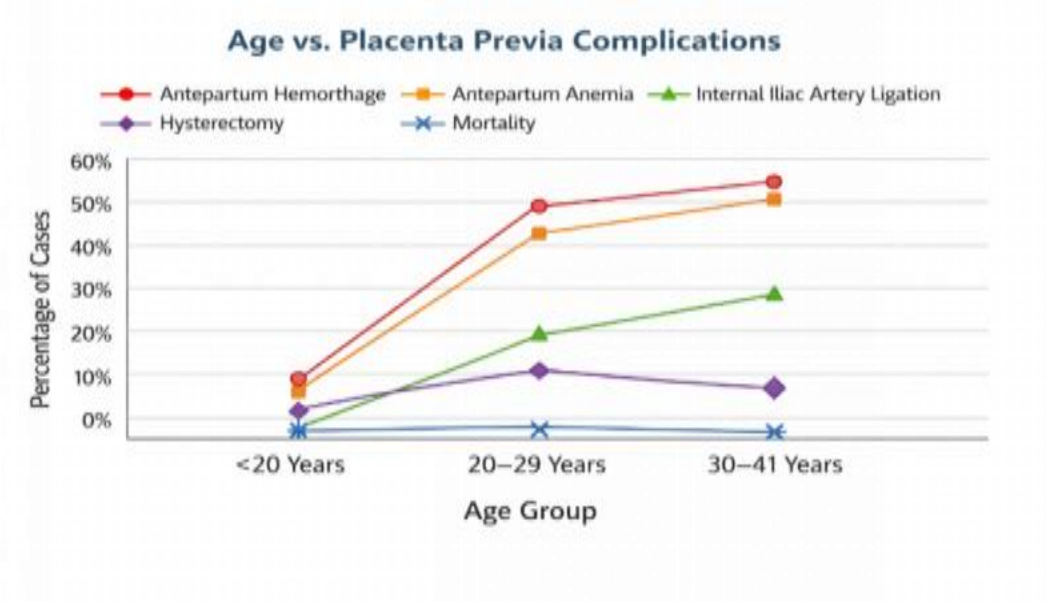


Figure 4. Relation between age of the women and PAS complications.

(Upward trend of complications, specifically antepartum hemorrhage and anemia, associated with increasing maternal age groups.)

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No statistically significant association was found between maternal age and specific surgical complications or interventions, including hysterectomy (Table 10).

Table10. Relation between age of the women and surgical intervention

Item	Age group			
Surgical intervention	**20-29 yrs (n:19)**	**30-41 yrs n:85)**	**Total (n:105)**	**p-value**
Cesarean hysterectomy	1 (5.3%)	3 (3.5%)	4 (3.8%)	0.927
Internal iliac artery ligation	3 (15.8%)	21 (24.7%)	24 (22.9%)	0.690
B-Lynch	1 (5.3%)	3 (3.5%)	4 (3.8%)	0.927

Out of the 105 women studied, the majority were free from non-communicable diseases (92) (87.6%), while 13(12.4%) had non-communicable diseases indicating a predominantly healthy cohort. Among those with underlying conditions, diabetes mellitus (DM) and hypertension (HT) were the most common, each affecting 4 (3.8%) patients. Hypothyroidism and infertility were each observed in 2 (1.9%) participants, while asthma was reported in 1 (0.95%) case.no association found between hystrectomy & chronic medical disease (P = 0.502). (See Figure 5).

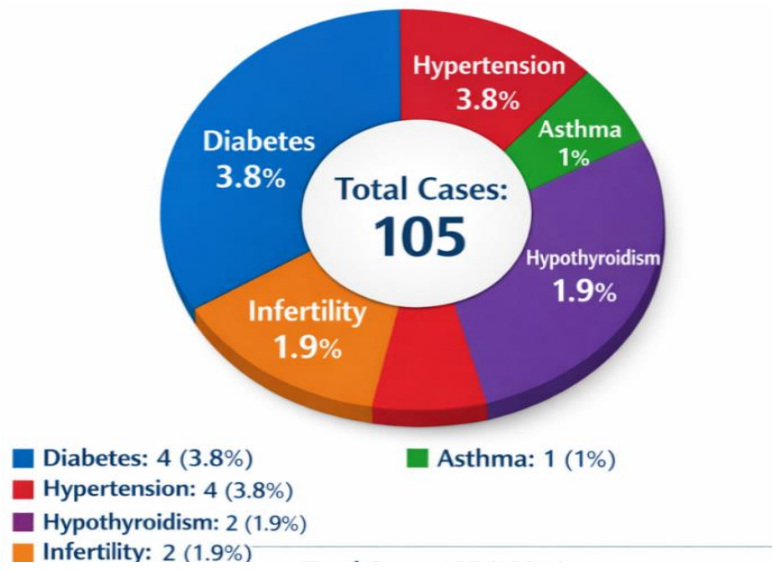


Figure 5: Distribution of chronic disease among PAS patient

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4. Discussion

Placenta accreta spectrum (PAS) is a leading cause of massive obstetric hemorrhage. The primary danger is severe antepartum or postpartum hemorrhage (PPH), which frequently results in the need for a cesarean hysterectomy, blood transfusions, and intensive care admissions [11]. PPH is the leading cause of maternal mortality worldwide, resulting in about 70,000 maternal deaths globally each year [12]. In our study, the overall incidence of PAS over the eight-year period was 0.53%, progressively increasing from 0.39% at 2017, to 1.06% by 2024. This trend suggests a gradual increase in the incidence of PAS in recent years, particularly from 2022 to 2024. PAS incidence is likely to continue increasing as a result of rising rates of caesarean births and the use of assisted reproductive technology. This result agrees with guidelines produced by the Royal College of Obstetricians and Gynecologists [13].

Out of the 105 women studied, there was 1 (0.95%) case of maternal mortality, Neither the WHO or the UNICEF publish a single specific global incidence of maternal mortality rate or percentage caused exclusively by placenta previa, Instead, placenta previa is classified under Obstetric Hemorrhage. Obstetric hemorrhage is the leading direct cause of maternal death worldwide, accounting for roughly 27% of all maternal mortality. In some regions, like parts of Asia, complications from placenta previa and abnormal placental attachment account for up to 30% of all local maternal hemorrhage deaths [14, 15].

In Regard to patients age, the mean age of participants was 33.5 ± 5.1 years, with the majority (81%) between 30–41 years. Only 1 case was under 20 years (0.95%), while 18.1% were between 20–29 years, Advanced maternal age has been repeatedly cited as a risk factor for abnormal placentation due to cumulative uterine damage and increased rates of previous uterine surgery [2, 16]. The vast majority of our cohort were either multiparous or grand multiparous, mimicking broader reproductive trends indicating that repeated pregnancies contribute to endometrial damage and abnormal invasion [17, 18]. The predominance of PAS in women aged 30–41 in this study suggests that age acts synergistically with other risk factors, particularly multiple cesarean deliveries. Younger women (<29 years) showed fewer complications, which may reflect both lower surgical history and better uterine healing capacity. while Complications and surgical interventions, including hysterectomy, were more frequent among women in the older age group (≥30 years)**.** The statical analysis in this study confirmed that age was significantly correlated with surgical complications and hysterectomy rates**,** supporting the global evidence that advanced maternal age increases PAS severity [17, 18]. Although total hysterectomy cases were four, only one case at the age group 20-29 years and three cases at the age group 30-41 years so, the majority of hysterectomy cases occurred among women aged 30–41 years (75.0%), followed by those aged 20–29 years (25.0%), while no cases were reported among women younger than 20 years. However, the association between age and hysterectomy was not statistically significant ($P = 0.920$).

While hysterectomy remained (3.8%), the significant correlation with antepartum hemorrhage (APH) and pre-operative anemia ($P < 0.05$) identifies these as the two most critical clinical predictors for radical surgery.

This study revealed that all hysterectomy cases experienced APH prior to the procedure, and all hysterectomy patients as reported by the current study were anemic prior to the procedure (P=0.045). Anemia reflects recurrent bleeding episodes that ultimately culminate in the need for radical surgery to control life-threatening hemorrhage. compared to only 42.6% in the non-hysterectomy group. This suggests that active bleeding before delivery is a major red flag for severe placental pathology. The current study revealed a significant relation between antepartum hemorrhage (APH) and the hysterectomy where P= 0. 029.Antepartum hemorrhage (44.8%) and preoperative anemia strongly predicted the need for radical surgery. Our findings align with literature stating that emergency surgical intervention due to severe bleeding is a major contributor to adverse maternal outcomes [18, 19]. The proportion of women with normal hemoglobin levels decreased to 22.1%,

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while the "Severe anemia" category remained constant at 0.95%. A significant decline in hemoglobin levels was observed after surgery (P = 0.00026), reflecting the substantial blood loss associated with PAS management.

The need for blood transfusion units ranged from one unite to 54 units with average of 27.5 units. A significant majority of the cases (91.4%) required at least one unit of blood with High Prevalence of Transfusion. The bulk of the patients (74.2%) fall within the 1 to 9-units range. Specifically, the most frequent requirement was1-2 units (39%), suggesting that while hemorrhage is common, it is often manageable with standard transfusion protocols. Approximately 17.2% of cases required 10 or more units, which often meets the clinical criteria for a "Massive Transfusion Protocol." The presence of extreme outliers—such as patients requiring 20 or even 54 units—points toward severe complications, likely involving placenta previa or emergency intrapartum hysterectomy. The low percentage of patients managed without transfusion (8.6%) indicates that PAS remains one of the most high-risk obstetric conditions. The wide variance in units (from 1 to 54) suggests that while most cases follow a predictable pattern, the potential for catastrophic blood loss is always present and requires immediate multidisciplinary readiness.

Previous cesarean sections were the most notable risk factor in our population, with 68.6% of participants having three or more prior cesarean deliveries, matching institutional warnings that previous cesarean delivery combined with placenta previa is the paramount risk factor for PAS [20].,while patient with no history of cesarian section or only one cesarian section form only11.4% Furthermore, a history of D&C (36.2%) supports evidence that repeated curettage damages the myometrium, predisposing to defective decidualization [21, 22], while myomectomy and laparoscopy 3.8% for each.

Conservative surgical approaches, particularly uterine reconstruction (69.5%), were heavily favored in our center to preserve fertility, reflecting contemporary shifts toward conservative management where clinically viable [23]. Internal iliac artery ligation in current study performed in (22.9%) of cases used to reduce pelvic blood flow and control bleeding. B – lynch sutures in this study applied in (3.8%) of cases to reduce pelvic blood flow and control bleeding and preserve fertility. The predominance of uterine reconstruction in this study shows a strong preference for fertility-preserving strategies. However, hysterectomy remained unavoidable in severe cases, consistent with global evidence that it is the most reliable intervention when conservative measures fail [24,25].

Severe hemorrhage necessitating hysterectomy (3.8%) remains a life-saving absolute when fertility-sparing techniques like B-Lynch sutures or internal iliac artery ligation fail [28]. All hysterectomies occurred between 33^{rd} –37^{th} weeks of gestation. No significant association was identified between hysterectomy and chronic diseases (P = 0.502), despite the presence of isolated cases among women with hypertension. Additionally, previous surgical history was not significantly associated with hysterectomy (P = 0.724). Overall, these findings indicate that hysterectomy was significantly associated with obstetric complications, particularly antepartum hemorrhage and anemia, rather than demographic or reproductive characteristics.

5. Conclusion

Placenta previa accreta spectrum is a life-threatening condition that still risk for Hysterectomy, but conservative interventions can reduce morbidity and preserve fertility in selected cases. Early diagnosis, multidisciplinary planning, and preparedness for massive transfusion are essential to improving maternal outcomes. Preventive strategies, particularly reducing unnecessary primary cesarean deliveries, are critical to lowering PAS incidence in future generations.

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THICAL STATEMENTE:
This retrospective study evaluated historical data collected between 2017 and 2024. Institutional ethical review and formal patient consent were deemed not applicable by the institutional ethics committee at Elsaid Hospital because the study relied solely on pre-existing, de-identified secondary data. To ensure strict patient confidentiality, all datasets were completely anonymized prior to investigator access. All data handling procedures were conducted in secure, password-protected systems in accordance with the ethical principles of the Declaration of Helsinki.

CONFLICT OF INTEREST
The authors declare that they have no financial, professional, or personal relationships that could influence or appear to influence the work reported in this paper.

AUTHORS' CONTRIBUTIONS
N.B. A Conceptualization, methodology, literature review, primary manuscript drafting and revision. A.Z. Supervised clinical validation, and critical manuscript revision. F. G. Data curation, formal analysis.

6. References

1. FIGO. Placenta accreta spectrum disorders. Int J Gynaecol Obstet. 2019;144(3):341-349.
2. Tadayon M, et al. Frequency, risk factors, and pregnancy outcomes in cases with placenta accreta spectrum disorder: a case-control study. J Reprod Infertil. 2022;23(4):279.
3. American College of Obstetricians and Gynecologists. Incidence of placenta accreta spectrum. Obstet Gynecol. 2026;148(1):45-52.
4. Matsuo K, et al. Hospital surgical volume--outcome relationship in caesarean hysterectomy for placenta accreta spectrum. BJOG. 2022;129(6):986-993.
5. Yang R, et al. Risk of Placenta Accreta Spectrum Disorder After Prior Non-Cesarean Delivery Uterine Surgery: A Systematic Review and Meta-analysis. Obstet Gynecol. 2025;145(6):628-638. Available from: https://doi.org/10.1097/AOG.0000000000005824
6. Khoury-Collado F, et al. Surgical Techniques for the Management of Placenta Accreta Spectrum. Am J Perinatol. 2023;40(9):970-979. Available from: https://doi.org/10.1055/s-0043-1761636
7. American College of Obstetricians and Gynecologists. Management of placenta accreta. Obstet Gynecol. 2012;120(1):207-211.
8. Overton E, et al. Outcomes associated with peripartum hysterectomy in the setting of placenta accreta spectrum disorder. Am J Obstet Gynecol MFM. 2023;5(12):101174. Available from: https://doi.org/10.1016/j.ajogmf.2023.101174
9. Miller SE, et al. Red Blood Cell Transfusion in Patients with Placenta Accreta Spectrum: A Systematic Review and Meta-analysis. Obstet Gynecol. 2023;141(1):49-58. Available from: https://doi.org/10.1097/AOG.0000000000004976
10. FIGO. Maternal morbidity in placenta accreta spectrum. Int J Gynaecol Obstet. 2024;165(2):210-217.
11. Atjimakul T, et al. Bleeding control and posterior vaginal fornix approach for cesarean hysterectomy in placenta accreta spectrum. Obstet Gynecol Sci. 2025;68(4):346-348. Available from: https://doi.org/10.5468/ogs.24216
12. Demissie DB, Kaura DK, Gebhardt S. Global burden, disparities, and determinants of postpartum haemorrhage among women who gave birth: an umbrella review of systematic reviews and meta-analyses. Front Reprod Health. 2025;7:1721550.
13. Royal College of Obstetricians and Gynaecologists. Placenta accreta spectrum updated guidelines. BJOG. 2026;133(7):e50-e65.
14. Kainer F, Hasbargen U. Emergencies associated with pregnancy and delivery: peripartum haemorrhage. Dtsch Arztebl Int. 2008;105:629-638. Available from: https://doi.org/10.3238/arztebl.2008.0629

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15. Nieto-Calvache AJ, et al. All maternal deaths related to placenta accreta spectrum are preventable: a difficult-to-tell reality. AJOG Glob Rep. 2021;1(3):100012. Available from: https://doi.org/10.1016/j.xagr.2021.100012
16. Dashe JS, et al. Williams Obstetrics. 25th ed. New York: McGraw Hill Professional; 2018.
17. Allen R. Multiparity and maternal risk. J Perinat Med. 2000;28(2):116-121.
18. Sentilhes L, et al. Conservative management or cesarean hysterectomy for placenta accreta spectrum: the PACCRETA prospective study. Am J Obstet Gynecol. 2022;226(6):839.e1-839.e12.
19. Zhan Y, et al. Cesarean hysterectomy in pregnancies complicated with placenta previa accreta: a retrospective hospital-based study. BMC Pregnancy Childbirth. 2024;24(1):634. Available from: https://doi.org/10.1186/s12884-024-06834-z
20. Liu B, et al. Prediction of cesarean hysterectomy in placenta previa complicated with prior cesarean: a retrospective study. BMC Pregnancy Childbirth. 2020;20(1):81. Available from: https://doi.org/10.1186/s12884-020-2790-9
21. American College of Obstetricians and Gynecologists. Previous cesarean delivery and PAS. Obstet Gynecol. 2025;146(2):112-119.
22. Matsuzaki S, et al. Trends, characteristics, and outcomes of placenta accreta spectrum: a national study in the United States. Am J Obstet Gynecol. 2021;225(5):534.e1-534.e12.
23. Iacovelli A, et al. Myomectomy scars and abnormal placentation. J Minim Invasive Gynecol. 2022;29(5):610-616.
24. Tinari S, et al. Risk factors, histopathology and diagnostic accuracy in posterior placenta accreta spectrum disorders: systematic review and meta-analysis. Ultrasound Obstet Gynecol. 2021;57(6):903-909.
25. Jauniaux E, et al. FIGO classification for the clinical diagnosis of placenta accreta spectrum disorders. Int J Gynaecol Obstet. 2019;146(1):20-24. Available from: https://doi.org/10.1002/ijgo.12761

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