



មជ្ឈមណ្ឌលជាតិគាំពារមាតា និងទារក
National Maternal and Child Health Center

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ប្រធានបទ៖ «រួមគ្នាបង្កើនគុណភាពសេវាព្យាបាល ថែទាំ និងសង្គ្រោះមាតា និងទារក »

**Management for Postpartum Hemorrhage Complicated from
Placenta Previa by B-Lynch Transverse compression suture
technique**

from January 1st to December 31st 2025 at NMCHC



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❖ **Objective**

To show the effectiveness of B-lynch Transverse compression suture
Technique in the management of postpartum hemorrhage with Placenta
Previa Bleeding

I. Introduction

- Placenta previa (PP) is characterized by the abnormal placenta overlying the endocervical os, and it is known as one of the most feared adverse maternal and foetal-neonatal complications in obstetrics [[1](#), [2](#)]. Thus, women with placenta previa have often increased the risk of postpartum haemorrhages (PPH).
- Maternal deaths due to PPH have increased in many countries [[8](#), [9](#), [10](#)]. It is accounting for about 30% of all pregnancy-related deaths in Asia and Africa [[11](#), [12](#)].

1. Types of placenta previa

- ❖ **Lower lying placenta:** The placenta is in the lower segment of uterus but dose not reach the opening of the cervix.
- ❖ **Marginal placenta previa:** The placenta is position at the edge od cervix. It's touching cervix but not covering.
- ❖ **Partial placenta previa:** The placenta partially cover cervix.
- ❖ **Complete or total placenta previa:** The placenta is completely covering cervix.



Stage I

Low-lying placenta –
The placenta is close
to the cervix but not
touching or covering
it



Stage II

**Marginal placenta
previa –** The edge of
the placenta just
touches the cervix
but doesn't cover it



Stage III

**Partial placenta
previa –** The
placenta partly
covers the cervix.



Stage IV

**Complete placenta
previa –** The
placenta fully covers
the cervix.

- ❖ Each type of placenta previa can cause vaginal bleeding during pregnancy and labor.
- ❖ Placenta previa occurs in about 1 in 200 pregnancies. Pregnancy care providers usually diagnose it in the second trimester by ultrasound (≥ 28 weeks).

2. Risk factors for placenta previa:

- Previous uterine surgery: previous c-section, Myomectomy or uterine curettage
- Previous placenta previa
- Multigravida
- Advanced maternal age: >35years
- Multiple pregnancy: Twins, Triplets
- Smoking/cocaine use
- IVF pregnancy
- Uterine abnormal: Fibroid, Congenital uterine anomalies.

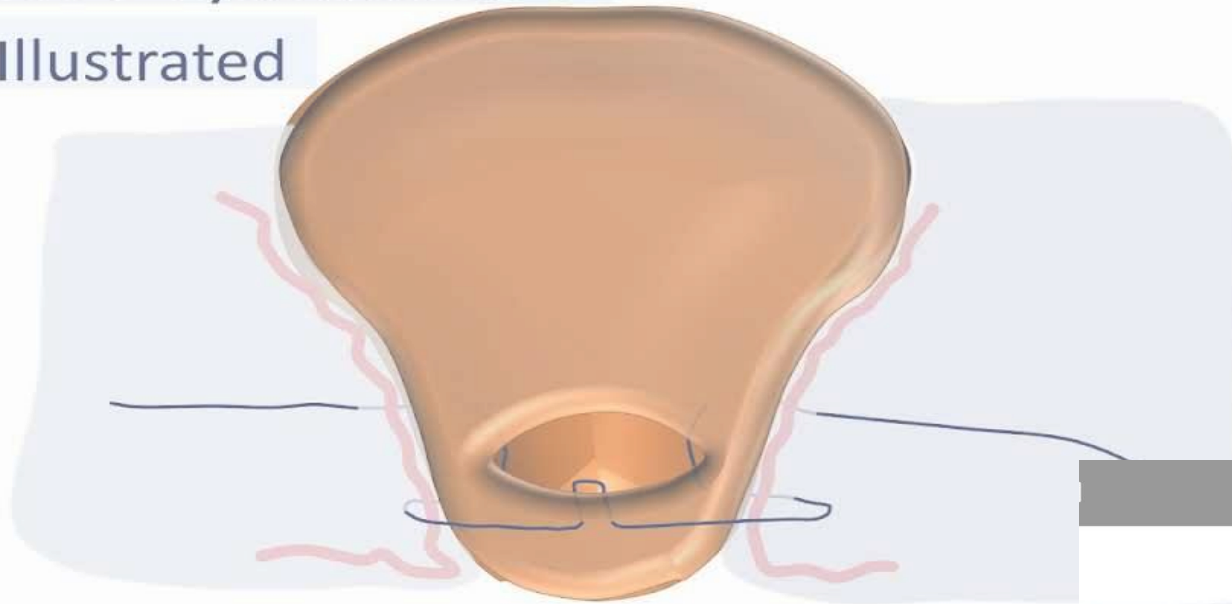
3. Management of PPH with placenta previa bleeding

- ❖ Medical management : IV fluid, Oxytocin, +/-Misoprostol,
Tranexamic acid, Mechanical control: Bakri ballon
- ❖ Surgical management:
 - Uterine compression sutures(B-Lynch suture, B-Lynch Transverse suture),
 - Uterine artery ligation,
 - Hysterectomy.
 - Internal iliac artery ligation,

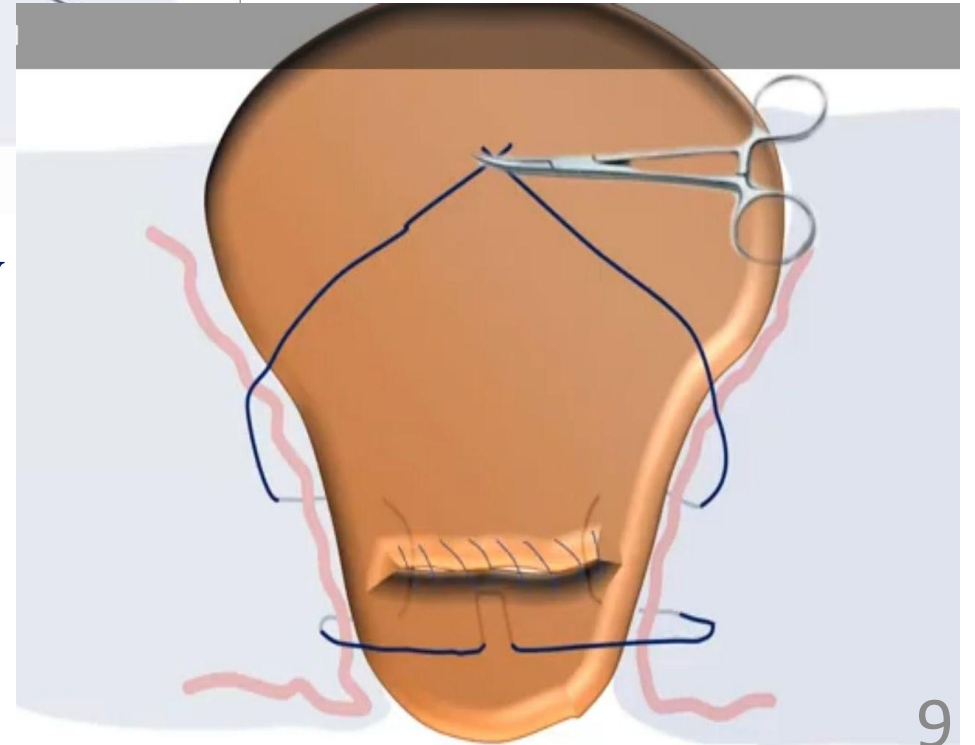
- They have used since 2006 by Meyer & Javaid), have been practiced worldwide.
- In this study, we describe outcomes of the Transverse B-Lynch compression suture in managing PPH due to placenta previa.
- This suturing technique, when applied correctly, has been highly successful without any problems or apparent complications.

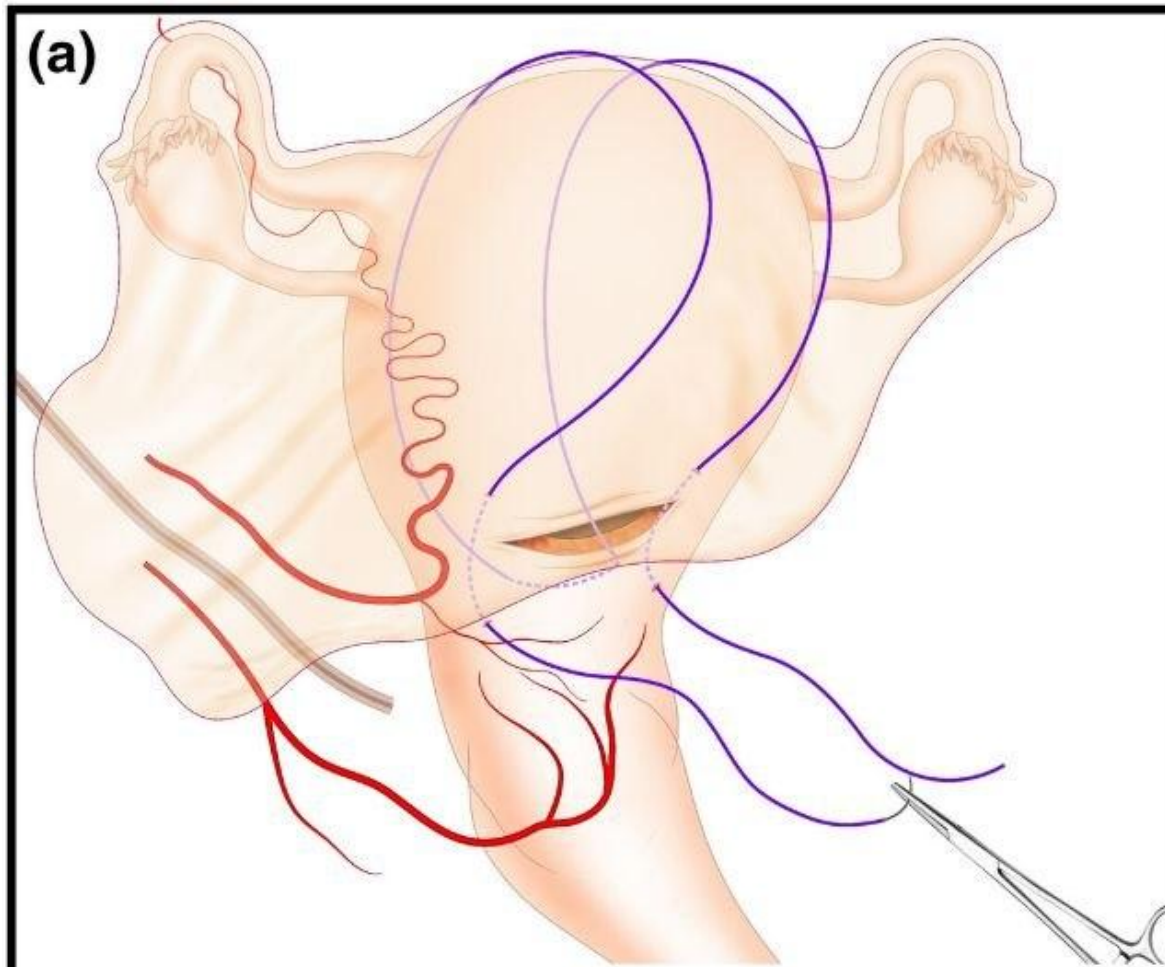
Transverse B-Lynch suture

Illustrated

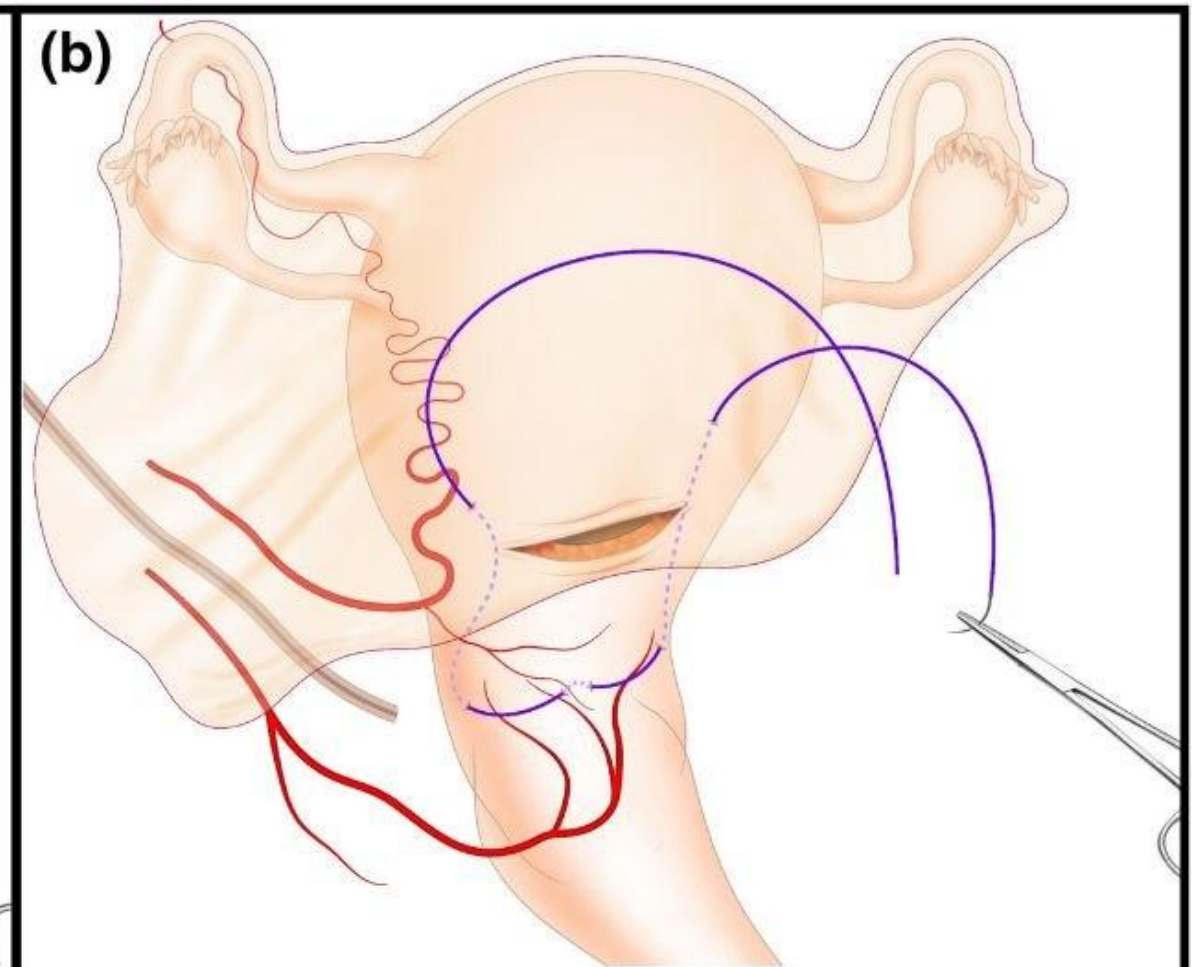


Compresses the lower segment transversely
whilst an assistant check
The vaginal to ensure that
The bleeding is controlled.

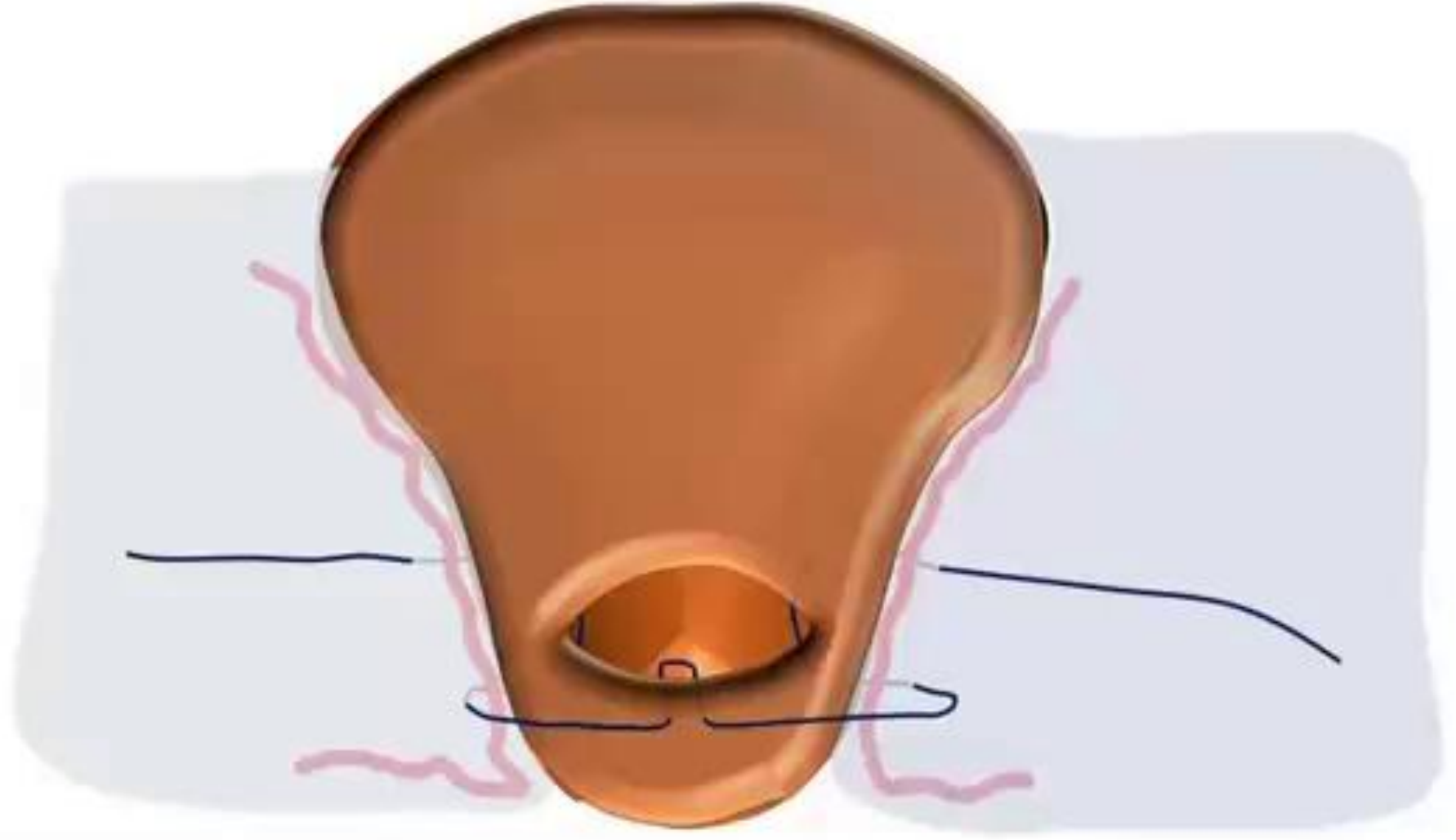




B- Lynch 1
Uterine body (S1)



B-Lynch 2
Lower uterine segment or cervix (S2)



Reverse Bunch culture

II. Material and Method

Retrospective study of Management for Postpartum Hemorrhage Complicated from Placenta Previa by B-Lynch Transverse compression suture technique 12cases of total 74 cases of placenta previa from January 1 .2025 to December 31 .2025 at NMCHC.

- **Inclusion criteria:** Patient undergoing caesarean with placenta previa bleeding and normal hemoglobin.
- **Exclusion criteria:** Patients with traumatic post-partum hemorrhage, placenta accreta/increta/percreta, disseminated intravascular coagulation, and retained bits of placenta, post term, PPH after vaginal delivery.

III. Result

Table 1. Frequency of B-Lynch Transverse

In the study, there were placenta previa 74 cases , out of which 11 cases of B-Lynch Transverse successful but have 1 case fail occurred from 1 January 2025 to 31 December 2025 at the obstetrics department in the National Maternal and Child Health Center in Phnom Penh.

Technique	Cases	Frequency
B-Lynch Transverse	11	91.7%
B-Lynch Transverse + Tsirulnikov	1	8.3%

Table 2 :Distribution according to patients age with B-lynch Transverse

Age group (years)	Cases =12	Percentage(%)
< 18	0	0%
18-28	2	16.7%
28-38	4	33.3%
38-45	6	50 %

Majority of the patients were in the age range of 38-45years and then 28-38years.

Table 3: Distribution of gravidity

Gravida	Number of cases	Percentage%
Primigravida	2	16.7
Multigravida	10	83.3

My study included primigravida, which had 2 cases (16.7%), and multigravida, which had 10 cases (83.3%).

Table 4: Distribution of parity

Parity	Cases 12	Percentage
Primiparous	5	41.7%
Multiparous	7	58.3%

Out of 12 patients, 5cases (41.7%) women were primiparous and 7cases (58.3%) were multiparous.

Table 5: Gestational age

Gestational age(weeks)	cases 12	Percentage %
28 - 36	6	50%
37- < 41	6	50%

In our study, 50% were preterm pregnancies whereas 50% were term pregnancies, are the same.

Table 6: Distribution of risk factor for PPH with placenta previa

Risk factors	Cases 12	Percentage %
Previous c-section	2	16.6%
Multigravida	5	41.7%
Advanced maternal age with Multigravida	5	41.7%
Previous placenta previa	0	0%

- The major risk factor accounting for placenta previa was advanced maternal age with multiparity(41.7%), and Previous c-section 16.6%.

Table 7: Distribution according to Hemoglobin level with B-lynch Transverse

Placenta previa bleeding	Hb Level (g/dL)	Cases 74	Percentage%
B-lynch Transverse	≥ 11 g/dL	12	16.2%
Other Technique	< 7 g/dL	62	83.8%

About 16.2% of the cases were B-lynch Transverse and 83.8% were other technique in our study.

IV. Discussion

1. Distribution according to patients age with B-lynch Transverse suture

Country	Author	38-45(year)
NMCHC,Cambodia (2025)	Our study	50%
Rajikot, India 2022	Dr. Zalak Karena	16.7%
Pakistan 2020	Dr. Farnaz Zahoor	28.6%

In our study, a total of 12 women who underwent B-lynch suturing for control of PPH placenta previa bleeding during cesarean section. The maternal age are most commence 38-45 years were 50% which are higher than Pakistan(28.6%) but lower the study at Rajikot, India (16.7%).

2. Distribution according to gravidity

Country	Author	Multigravida
NMCHC,Cambodia (2025)	Our study	83.3%
Rajikot, India 2022	Dr. Zalak Karena	66.7%
Pakistan 2020	Dr. Farnaz Zahoor	71.4%

In our study of gravidity, we observe that multigravida were 83.3% which are superior to a study done by Farnaz Zahoor (71.4%) and by Zalak Karena(66.7%).

3. Gestational age

Country	Author	37- < 41w+6d
NMCHC,Cambodia (2025)	Our study	50%
Rajikot, India 2022	Dr. Zalak Karena	50%
Pakistan 2020	Dr. Farnaz Zahoor	57.1%

In our study, 37- 40w6d (50%) are the same the study by Dr. Zalak Karena (50%) but higher a study by Dr. Farnaz Zahoor (57.1%).

4. Distribution of risk factor for PPH with placenta previa

Country	Author	Previous c/s	Multigravida	Advanced maternal age with Multiparity
NMCHC, Cambodia (2025)	Our study	16.6%	41.7%	41.7%
Rajikot, India 2022	Dr. Zalak Karena	16.7%	66.7%	16.7%
Pakistan 2020	Dr. Farnaz Zahoor	14.3%	71.4%	14.3%

The most commons of risk factor for PPH with placenta previa is Multigravida.

5. B-lynch Transverse suture application Success

Country	Author	B-lynch Transverse
NMCHC,Cambodia (2025)	Our study	91.7%
Rajikot, India 2022	Dr. Zalak Karena	66.7%
Pakistan 2020	Dr. Farnaz Zahoor	71.4%

The procedure of B-lynch transverse in our study 91.7% more than Rajikot, India (66.7%) and Pakistan (71.4%).

6. Blood Transfusion in B-lynch Transverse suture

Country	Author	Blood Transfusion
NMCHC,Cambodia (2025)	Our study	None
Rajikot, India 2022	Dr. Zalak Karena	25%
Pakistan 2020	Dr. Farnaz Zahoor	20%

In our study, no blood transfusion, but at India has blood transfusion 25% and Pakistan 20%.

V. Conclusion

- Our study shows that B-Lynch Transverse is 91.7% can stop PPH due to placenta previa during caesarean section
- It proves to be a great advantage in young patient with future fertility, simplicity and ease of application lesser time of application, lesser blood loss, lesser blood transfusion, and lesser skill required.
- Attempted as early as possible to maximize its success in patients at high risk of PPH placenta previa.

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