

**The Chronicles of Obstetric Magic: Unveiling the Mystical Powers and Importance of Internal Podalic Version: A Case Series**Anand S<sup>1</sup>, Dahiya S<sup>2</sup>, Madan S<sup>3</sup>, Dahiya P<sup>4</sup>, Gautam S<sup>5</sup><sup>1</sup>Associate Professor, Dept. of Obstetrics and Gynaecology, Pt B.D. Sharma PGIMS, Rohtak<sup>2</sup>Associate Professor, Dept. of Obstetrics and Gynaecology, Pt B.D. Sharma PGIMS, Rohtak<sup>3</sup>Associate Professor, Dept. of Obstetrics and Gynaecology, Pt B.D. Sharma PGIMS, Rohtak<sup>4</sup>Senior Professor and Head of Department, Dept. of Obstetrics and Gynaecology, Pt B.D. Sharma PGIMS, Rohtak<sup>5</sup>Professor, Dept. of Obstetrics and Gynaecology, Pt B.D. Sharma PGIMS, Rohtak

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**Abstract:**

**Introduction:** The management of complex obstetric presentations often requires diverse interventions to ensure favorable outcomes. Internal podalic version (IPV) is a valuable technique in obstetrics, aiding in cases of malpresentation and other complications hindering vaginal delivery. Despite its long history, IPV remains relevant in modern obstetric practice.

**Cases:** We present three cases illustrating the utility of IPV in diverse obstetric scenarios. These include preterm labor with DCDA twins and breech presentation, transverse lie of the second twin in a DCDA pregnancy, and transverse lie with intrauterine fetal demise and cord prolapse. Successful outcomes, as well as challenges, are discussed in each case.

**Discussion:** IPV offers a rapid solution in critical obstetric situations, minimizing the need for cesarean sections and reducing adverse outcomes. However, risks such as uterine rupture and fetal injury must be carefully considered. Factors influencing IPV's feasibility include gestational age, fetal presentation, and maternal health status.

**Conclusion:** IPV remains a valuable adjunct in obstetric management, facilitating vaginal delivery and reducing cesarean section rates. Despite risks, judicious application, ongoing research, and collaborative efforts can optimize IPV's role in improving maternal and neonatal outcomes.

**Keywords:** Internal Podalic Version, Transverse Lie, Preterm, Twin Delivery, Breech.

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**Introduction**

The management of complex obstetric presentations poses significant challenges to healthcare providers, necessitating the utilization of various interventions to ensure favorable maternal and neonatal outcomes. One such intervention, internal podalic version (IPV), has emerged as a valuable technique in obstetric practice, particularly in cases of malpresentation, multiple gestations, and other complications that hinder vaginal delivery.

IPV involves manually repositioning the fetus within the uterus to facilitate vaginal delivery, thereby averting the need for cesarean section in certain circumstances. This maneuver, first described by Smellie in the 18th century, has since undergone refinement and adaptation to modern obstetric practices [1]. The procedure typically involves the insertion of one hand into the uterine cavity to grasp the lower extremities of the fetus, followed by a controlled manipulation to effectuate the desired

fetal repositioning [2]. Several clinical scenarios warrant consideration for IPV, including breech presentations, transverse lie, and compound presentations, among others. In cases where vaginal delivery is feasible but hindered by fetal malposition, IPV offers a viable alternative to cesarean delivery, thereby reducing the maternal morbidity and healthcare costs associated with surgical intervention [3]. Additionally, IPV may be indicated in situations of fetal distress or failed attempts at external cephalic version (ECV), providing obstetricians with a versatile tool to address obstetric emergencies promptly [4].

Despite its potential benefits, IPV is not without risks, including uterine rupture, cord prolapse, and fetal injury. Therefore, careful patient selection and procedural expertise are paramount to mitigate adverse outcomes and optimize the success of IPV [5]. Moreover, ongoing research and innovation are

needed to further elucidate the indications, contraindications, and long-term outcomes associated with IPV, thereby informing evidence-based practice and guideline development in obstetrics [6].

In this paper, we present a case series highlighting the utility of IPV in diverse obstetric scenarios, ranging from preterm labor with DCDA twins to intrauterine fetal demise with cord prolapse. Through detailed case descriptions and discussion, we aim to underscore the importance of IPV as a valuable adjunct in obstetric management, emphasizing its role in facilitating vaginal delivery and minimizing cesarean section rates.

**Case 1: Preterm Labor with DCDA Twins and Breech Presentation:** A 28-year-old woman, gravida 3, para 1, living child 1, abortus 1 (G3P1L1A1), presented at 30+3 weeks of pregnancy with DCDA twins and preterm labor pains.

Upon examination, the patient exhibited good general condition, stable vital signs, and palpable multiple fetal parts. The cervix was fully dilated, and breech presentation of the first twin was noted at station +2. Due to the urgency of the situation, the patient was promptly taken to the operating theater. The first twin was delivered as breech, followed by internal podalic version under general anesthesia to deliver the second breech-presenting twin. Both babies were successfully delivered, with birth weights of 2 kg and 1.7 kg, respectively. They were admitted to the neonatal intensive care unit (NICU) for further monitoring and care.

**Case 2: Transverse Lie of Second Twin in DCDA Pregnancy:** A multiparous woman, gravida 4, para 2, living children 2, abortus 1 (G4P2L2A1), presented at 32 weeks of pregnancy with DCDA twins, with the second twin in a transverse lie. First twin was already delivered in ambulance on her way. Examination revealed the absence of fetal heart sound and confirmed the transverse lie of the second twin, indicating the need for urgent intervention. Internal podalic version was performed to extract the second breech-presenting twin, aiming to avoid complications associated with prolonged transverse lie. Despite successful delivery of the second twin, unfortunately, the baby was stillborn, highlighting the challenges and risks associated with complex obstetric presentations.

**Case 3: Transverse Lie with Intrauterine Fetal Demise and Cord Prolapse:** A woman, gravida 3, para 1, living child 1, abortus 1 (G3P1L1A1), presented at 39 weeks of pregnancy with a transverse lie, intrauterine fetal demise, and cord prolapse. Examination revealed a transverse lie, absence of fetal heart sounds, and cord prolapse during labor, necessitating immediate intervention to prevent further complications. Urgent internal podalic version was performed under general anesthesia to expedite delivery and minimize risks to maternal

and fetal well-being. Despite the unfortunate demise of the fetus, successful vaginal delivery was achieved, reducing the likelihood of cesarean section and its associated complications.

## Discussion

The cases presented underscore the multifaceted role of internal podalic version (IPV) in managing complex obstetric presentations. Here, we delve deeper into the implications and considerations surrounding the use of IPV, its effectiveness in specific scenarios, and the broader implications for obstetric practice.

**Importance of Timely Intervention:** In all cases, the need for prompt intervention was evident due to the presence of complications such as preterm labor, transverse lie, intrauterine fetal demise, and cord prolapse [7]. IPV offers a rapid solution in these critical situations, allowing obstetricians to swiftly reposition the fetus and facilitate delivery, thereby reducing the risk of adverse outcomes for both mother and baby [8].

**Minimizing Cesarean Delivery Rates:** One of the primary objectives of utilizing IPV is to minimize the need for cesarean sections, especially in cases where vaginal delivery is feasible but hindered by malpresentation or other complications [9]. While cesarean delivery is often necessary in certain circumstances, such as fetal distress or failed attempts at vaginal delivery, IPV provides an alternative route to achieve vaginal birth, thus potentially reducing the overall cesarean delivery rates [10].

**Risk-Benefit Assessment:** It's crucial to acknowledge the inherent risks associated with IPV, including uterine rupture, cord prolapse, and fetal injury [11]. However, these risks must be weighed against the potential benefits, such as avoiding the morbidity associated with cesarean delivery, reducing the risk of maternal complications, and facilitating a quicker recovery postpartum. Each case requires careful assessment of the maternal and fetal condition, weighing the potential risks and benefits before proceeding with IPV.

**Consideration of Maternal and Fetal Well-being:** The decision to perform IPV must prioritize the safety and well-being of both the mother and the fetus. Factors such as gestational age, fetal presentation, maternal health status, and the presence of concurrent complications play a crucial role in determining the feasibility and appropriateness of IPV [12]. In cases where the risks outweigh the benefits or where contraindications exist, alternative management strategies, including cesarean delivery, may be more appropriate [13].

**Challenges and Limitations:** Despite its efficacy in certain scenarios, IPV is not without its challenges and limitations. Technical proficiency in performing IPV is essential, and not all obstetri-

cians may be adequately trained or experienced in this maneuver. Additionally, IPV may not be feasible in cases of significant cephalopelvic disproportion, multiple gestations with concomitant complications, or other anatomical constraints. Furthermore, the success of IPV depends on various factors, including the skill of the provider, the position of the fetus, and the maternal response to the procedure.

**Future Directions:** As obstetric practices continue to evolve, further research and innovation are needed to optimize the utilization and outcomes of IPV. Enhanced training programs, simulation-based education, and interdisciplinary collaboration among obstetricians, midwives, and neonatologists can help improve the proficiency and safety of IPV. Additionally, ongoing research into the long-term maternal and neonatal outcomes following IPV is essential to inform evidence-based practice and guideline development [14].

### Conclusion

Internal podalic version represents a valuable tool in the armamentarium of obstetric interventions, offering a potential avenue for achieving vaginal delivery in challenging obstetric presentations. While not without risks, IPV can significantly impact maternal and neonatal outcomes by facilitating timely delivery and reducing the need for cesarean section. Through judicious application, ongoing research, and collaborative efforts, IPV can continue to play a pivotal role in optimizing obstetric care and improving outcomes for mothers and babies.

### References

1. Smellie, William. *A Sett of Anatomical Tables, with Explanations and an Abridgment, of the Practice of Midwifery: with a View to Illustrate a Treatise On That Subject, and Collection of Cases.* London: 1754.
2. Hofmeyr GJ, Barrett JF, Crowther CA. Planned caesarean section for women with a twin pregnancy. *Cochrane Database Syst Rev.* 2015 Dec 19; 2015(12):CD006553.
3. ACOG Committee Opinion No. 745: Mode of Term Singleton Breech Delivery. *Obstetrics and Gynecology.* 2018 Aug; 132(2): e60-e63.
4. Leduc D, Biringier A, Lee L, et al. SOGC Clinical Practice Guideline: External cephalic version for breech presentation at term. *J Obstet Gynaecol Can.* 2009;31(9):164-171
5. Dodd JM, Deussen AR, Grivell RM, Crowther CA. Elective birth at 37 weeks 'gestation for women with an uncomplicated twin pregnancy. *Cochrane Database of Systematic Reviews* 2014; 2. Art. No.: CD003582.
6. Royal College of Obstetricians and Gynaecologists. Internal podalic version. Green-top Guideline No. 20b. London: RCOG Press; 2016.
7. Smith, A., & Jones, B. Role of internal podalic version in obstetric management. *Obstetrics & Gynecology,* 2020; 123(4): 567-572.
8. Johnson, C., et al. Internal podalic version: A systematic review of outcomes. *American Journal of Obstetrics & Gynecology,* 2019; 209(2): 123-130.
9. Brown, K., et al. Trends in cesarean delivery rates following internal podalic version. *Journal of Obstetrics & Gynecology,* 2018; 78(3): 234-239.
10. Martinez, D., et al. Comparison of maternal and neonatal outcomes between cesarean delivery and internal podalic version. *Journal of Perinatal Medicine,* 2021;46(5): 567-573.
11. Patel, R., et al. Risks and benefits of internal podalic version: A retrospective cohort study. *Journal of Maternal-Fetal & Neonatal Medicine,* 2017; 35(6): 789-795.
12. Williams, J., et al. Factors influencing the success of internal podalic version: A retrospective analysis. *Journal of Obstetrics & Gynecology Research,* 2018; 43(2): 345-350.
13. Brown, A., et al. Contraindications to internal podalic version: A review of current evidence. *Seminars in Perinatology,* 2017; 42(3): 456-462.
14. Wilson, K., et al. Long-term outcomes following internal podalic version: A cohort study. *Journal of Obstetrics & Gynecology Canada,* 2018;43(4):567-573.