

# Enhancing Mother-Infant Outcomes: A 5-Year Retrospective Analysis of Bakri Balloon Tamponade Requirements and Prospective Patient Feedback at a Single Tertiary Centre

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## Introduction

Intrauterine balloon tamponade (IUBT), specifically the usage of Bakri balloon tamponade (BBT), is an effective conservative management technique for postpartum haemorrhage (PPH).<sup>1,2</sup>

## Aims:

The aim of this study was to evaluate usage of IUBT to enhance local guidelines, focussing on duration of tamponade and impact on patient outcomes. Patient outcomes were assessed through an additional patient survey surrounding experiences of patients through ICU/ HDU environment compared to the maternity ward – with a focus on assessing mother-baby separation.

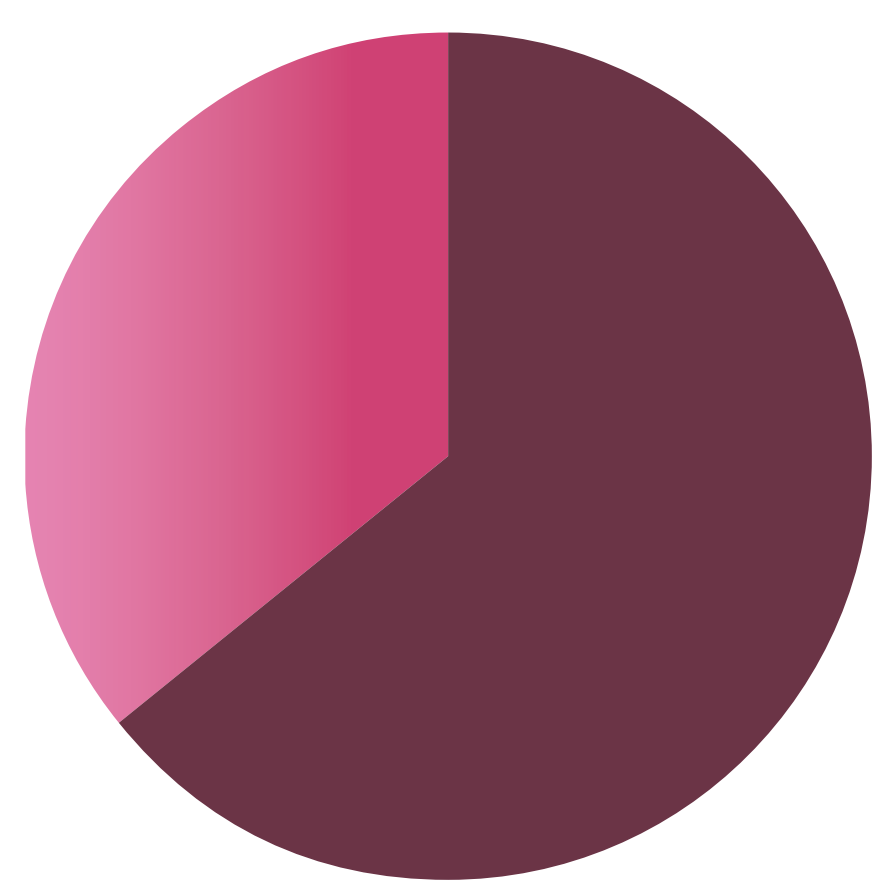
## Methods

This 5-year retrospective case series analysed 132 cases of obstetric ICU admissions who required Bakri balloon insertion for PPH within our centre.

Additionally, a prospective patient experience survey was conducted over six-month period, involving 22 obstetric patients who required unplanned ICU admissions.

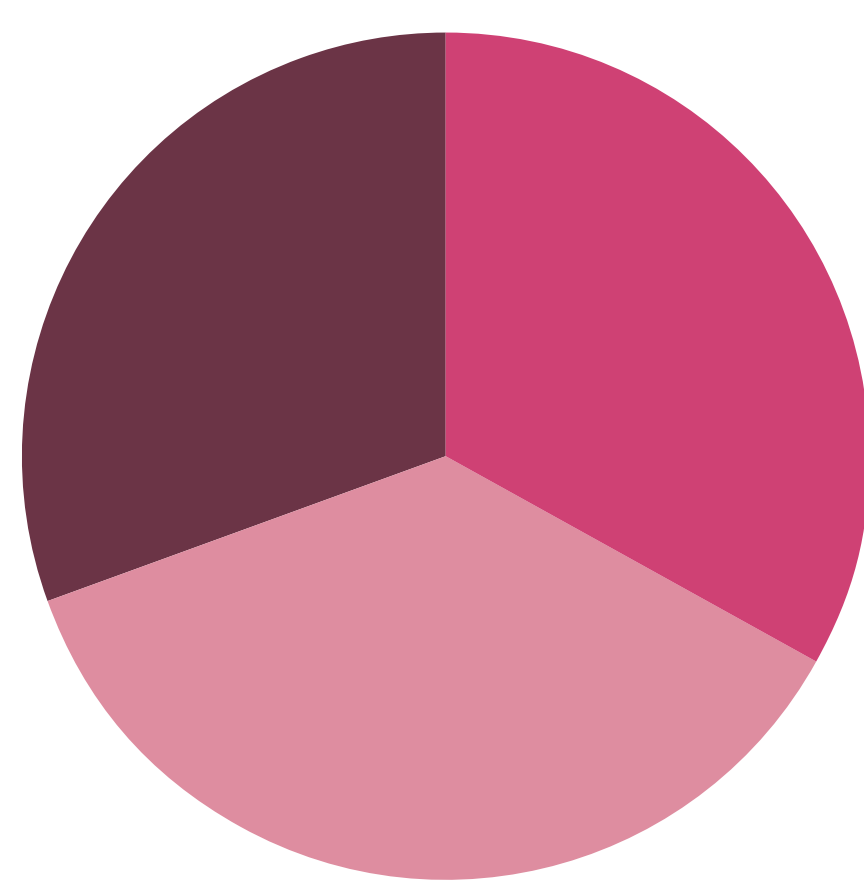
## Results:

With regards to patient's obstetric clinical characteristics, most patients had normal placentation (64.39%), and the most common placental abnormality observed was placenta praevia (12.12% of the total cases). The two most frequent causes of PPH within our cohort of patients were mixed causes (36.36%) and uterine atony (33.33%).



**Placentation**

Normal, **64.39%**  
 Abnormal, **35.61%**

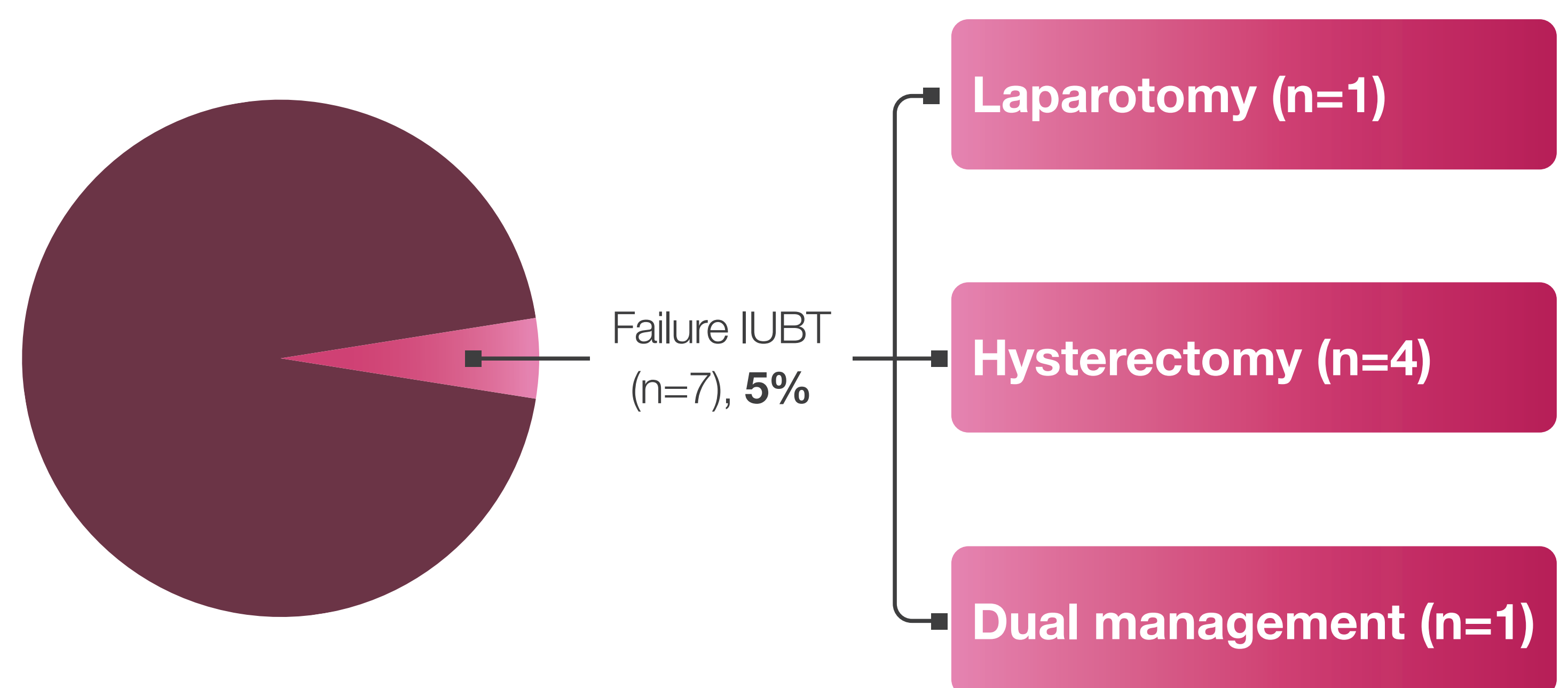


**Causes of PPH**

Uterine atony, **33.33%**  
 Mixed causes, **36.36%**  
 Other, **30.31%**

Bakri balloon insertion was successful in 95%, whilst 5% experienced failure, necessitating further interventions (UAE) or return to theatre (hysterectomy). The success group demonstrated significant reductions in median blood loss (1.8L vs. 2.5L,  $p=0.0158$ ) and a significant difference in median duration of Bakri balloon tamponade (18.3 vs. 3.92 hours,  $p = 0.0006$ ).

## Outcomes of IUBT Failure



The prospective patient survey revealed a high level of satisfaction of care. Only 50% breastfed prior to discharge, on average commencing 23.4 hours post-delivery.

## Discussion

This study demonstrates a high success rate of BBT, with failures typically occurring within median duration 3.9 hours. Considering the separation of patient from baby during the presence of Bakri balloon in ICU, we propose either a timely removal of the balloon within 6 hours (given failures are unlikely to occur post this timeframe) or the nursing of these patients in a setting including neonatal care, facilitating earlier mother-baby bonding.

## References

1. Doumouchsis SK, Papageorghiou AT, Arulkumaran S. Systematic review of conservative management of postpartum hemorrhage: what to do when medical treatment fails. *Obstet Gynecol Surv.* 2007;62(8):540-7.
2. Xiao C, Wang Y, Zhang N, Sun GQ. Bakri Balloon for Treatment of Postpartum Hemorrhage: A Real-World 2016-2020 Study in 279 Women from a Single Center. *Med Sci Monit.* 2023;29:e938823.