

# Broad Ligament Hematoma Following Uncomplicated Spontaneous Vaginal Delivery: A Case Report and Review of Literature



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## Introduction

Broad ligament hematomas are an uncommon complication of pregnancy and delivery, and an even less common complication following spontaneous vaginal deliveries. This case demonstrates a broad ligament hematoma following an uncomplicated spontaneous vaginal delivery and its subsequent complications during postpartum care. A literature review was performed to provide context to this unusual case.

## Patient History

- 30-year-old G3P1011 at 37w4d presented for headache and elevated blood pressures at work
- History of term vaginal delivery and pre-eclampsia without SF, IAB. Current pregnancy complicated by large AC, now gHTN
- No prior surgeries, no other pertinent medical history

## Patient Course

- Uncomplicated IOL – 2 miso, Pitocin, epidural, AROM, IUPC, pushed for 19 minutes.
- Uncomplicated spontaneous vaginal delivery – 3360 g infant, no lacerations, QBL 400 cc.
- 2.5 hours after delivery**
  - Vasovagal episode with new hemodynamic instability
  - Manual sweep performed
  - H/H 8.6/26.4 from 12.3/36.8, fibrinogen 129
  - CTA with hemoperitoneum and 11x6x5 cm collection in the left adnexa with no active bleeding
  - IR consulted, no intervention indicated. PCA started for abdominal pain.
- 10.5 hours after delivery**
  - Persistent abdominal pain and distention
  - CTA ordered; decision made to move to OR
- Exploratory laparotomy**
  - 2.1 L hemoperitoneum, left broad ligament hematoma diagnosed with defects in posterior ligament and repaired.
  - Vaginal exam and cystoscopy negative.
- Total blood products transfused – 5u PRBC, 4u FFP, 1u platelets.
- POD#0 – repeat CTA for persistent pain negative.
- POD#3 – new leakage of serosanguinous fluid, to OR and fascial dehiscence repaired.
- POD#5 – discharged home.

## Review of Literature

- Broad ligament hematoma was first described in 1904.
- Incidence estimated to be 1:20,000 following vaginal delivery.
- Literature review yielded 11 reported cases of broad ligament hematoma following vaginal delivery.
- Patient characteristics widely varied – from 21 to 40 years old, nulliparous patients to multiparous, 27w to 41w gestation, 2830 g to 4000 g infants.
- Presenting symptom was most commonly pain <6 hours from delivery.
- Most patients presented with hemodynamic instability.
- A wide variety of diagnostic methods were utilized.
- Management included expectant, operative intervention, IR intervention, and blood product transfusion.
- Average reported blood loss among patients was 2.5 L.

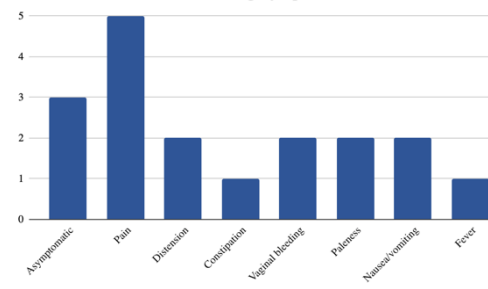
## Discussion

The review of literature highlights the low incidence of broad ligament hematomas following vaginal delivery with only 11 reported cases. Proposed etiologies include spontaneous vessel rupture, shearing trauma, extension of lacerations or episiotomy, fundal pressure, IUPC placement, operative vaginal delivery, PAS with invasion into the broad ligament, inherent weakness of structures, and intra-amniotic infection. This case is unusual in that it followed an uncomplicated induction and vaginal delivery with minimal blood loss. The diagnosis was made more challenging by initial imaging that did not demonstrate active extravasation. This case highlights the need for ongoing clinical assessment when clinical findings are not explained by initial evaluation.

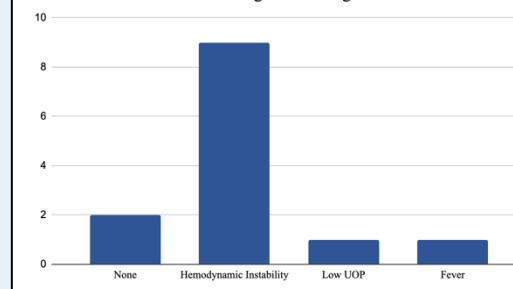
## Conclusion

Broad ligament hematomas following vaginal delivery are a rare but potentially life-threatening cause of postpartum hemorrhage. This case demonstrates how even an uncomplicated induction and delivery course can result in a broad ligament hematoma. For hospitalists, maintaining a high index of suspicion for retro-peritoneal and intra-abdominal hemorrhage is critical in patients with persistent abdominal pain, worsening anemia, abdominal distension, or hemodynamic instability. Early recognition and intervention can reduce maternal morbidity.

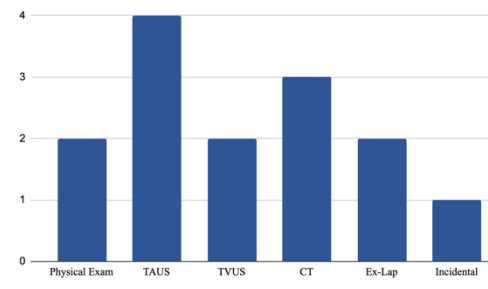
Presenting Symptoms



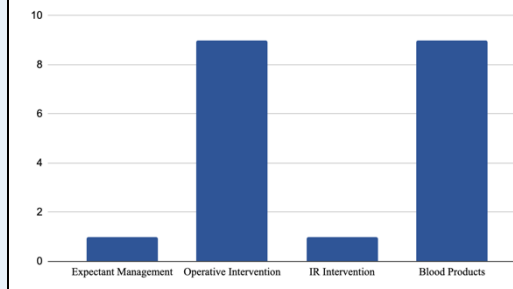
Presenting Clinical Signs



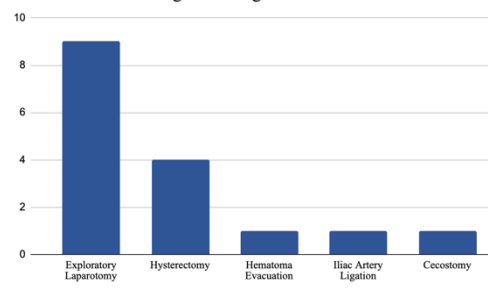
Diagnostic Methods Utilized



Management Methods Utilized



Surgical Management Utilized



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