NoCVA Preventing OB Adverse Events Collaborative

Lacerations
March 25, 2013
How to Participate Today

• Use the Hand Icon to raise your hand, your line will then be unmuted.
• Submit text questions through the Questions box.
• This session is being recorded and will be made available via the Collaborative Website.
• The slides from this presentation will be emailed to all attendees at the conclusion of the webinar.
Preventing OB Harm Events Due to 3\textsuperscript{rd} and 4\textsuperscript{th} Degree Lacerations

What’s the Challenge and the Opportunity?
Stan Davis, MD, ACOG
Physician Consultant
Objectives

- Understand the importance of definitions and coding for perineal lacerations
- Recognize the clinical factors associated with an increased risk of laceration
- Understand the increased risk of laceration with Operative Vaginal Delivery (OVD)
- Understand the risk of laceration with episiotomy

Many resources from ACOG.org with special thanks to Sarah Wood MD
“Third and fourth degree lacerations can produce significant long-term morbidity and mortality in women during childbirth. Chronic complications can include anorectal abscess, fistula formation, fecal incontinence, dyspareunia and can result in the need for operative repair. Therefore, the percentage of deliveries involving third or fourth degree lacerations is a useful quality indicator of obstetrical care and can assist in reducing the morbidity from extensive perineal tears”
Ob Revitalize

Perineal Lacerations

– 1° laceration extends into the perineal skin and may include the vaginal mucosa
– 2° laceration extends into the perineal body and does not involve the anal sphincter
– 2° laceration with capsular involvement extends into the perineal body and partially involves the anal sphincter
  (Frequently described as a partial 3° laceration)
– 3° laceration extends completely through the anal sphincter
– 4° laceration extends through the rectal mucosa
• Issues
  – 3rd or 4th degree laceration does not correctly include perineal lacerations or “partial 3rd degree laceration”; redefine to 2nd degree laceration with capsular involvement through the perennial body and starting into the anal sphincter but not going entirely through it
  – Do not currently know how to define partial 3° laceration; added 2° laceration with capsular involvement

• Rationale
  – Obstetrical trauma rating - no partial 3rd; it is more concerning from a patient perspective
  – 3rd degree is reportable event
  – On birth certificate would only be collecting 3° and 4° laceration
  – Expanded beyond 3° and 4° only by defining all degrees
Accuracy of Coding

- 393 Patients with clinically recognized and repaired anal sphincter laceration by medical record documentation
- 92/393 (24%) were coded incorrectly

Source: Brubaker, et al
Risk Factors for Severe Perineal Trauma

- Parity
- Length of second stage
- Previous anal sphincter laceration
- Neonatal birth weight
- OP presentation
- Shoulder dystocia
- Mode of delivery
1,942 non-diabetic, primiparous women, all >36 weeks
47% had episiotomy
• 11% had a 3\textsuperscript{rd} degree
• 3% had a 4\textsuperscript{th} degree
• Forceps +/- episiotomy associated with 10x increase in anal sphincter laceration compared to vacuum w/out episiotomy
• Vacuum w/ episiotomy associated with 7x increase in anal sphincter laceration compared to vacuum w/out episiotomy

Source: Robinson, et al.
ACOG’s Statement on Episiotomy

• Restricted use of episiotomy is preferable to routine use as it appears to decrease the likelihood of perineal lacerations.
• The single greatest risk factor for third- or fourth-degree lacerations is midline episiotomy; therefore, avoiding episiotomy may be the best way to minimize the risk of subsequent extensive damage to the perineum.
• No data supports the role of episiotomy in preventing pelvic floor damage
• No data supports effect of episiotomy on shoulder dystocia or neonatal benefits
• Episiotomy is associated with increased maternal blood loss at the time of delivery
• There is a place for episiotomy for maternal or fetal indications – fetal distress or “expediting difficult deliveries”

Source: ACOG
Association Between OVD and Episiotomy

• The ramifications of fecal incontinence and recto-vaginal fistulas are long-standing and likely underreported causing social, spousal, and psychological embarrassment and stress.

• Cesarean delivery while with lower rates of incontinence does not entirely protect against the long-term problems; therefore, post-partum evaluation and questioning of symptoms remains important in this population.

• Further research to identify means of decreasing the incidence of lacerations and its disabling consequences is necessary.
Impact of OVD with Episiotomy

Looked at anal sphincter lacerations in primiparous women, 33,000 vaginal deliveries over 5 years (5% forceps and 2.5% vacuum)

Results:

Percentage with anal sphincter laceration

- Spontaneous vaginal delivery (SVD) 3%
- SVD + episiotomy 15%
- Operative vaginal delivery (OVD) 18%
- OVD + episiotomy 40%

Source: Kudish, et al
**OVD + Episiotomy**

- **In Primiparous Women**
  - Forceps + episiotomy: 20x increased risk
  - Vacuum + episiotomy: 14x increased risk

- **In Multiparous Women**
  - 77x increased risk with forceps + episiotomy
OVD + Episiotomy

• Significant decrease in the incidence of lacerations from 6.35% to 5.43% over 5 years
  – Noted decline in operative vaginal deliveries and episiotomy

• Primiparity – dominant risk factor
  – Multiparous women had 1/6th the risk

• Other identified risk factors
  – Birth weight > 4000g, Shoulder dystocia, Ethnicity (Indian and Asian), Episiotomy w/ 4th degree lacerations, Operative vaginal delivery

• Operative vaginal delivery was the modifiable risk factor with the potential to contribute the most to a decrease in the rate of anal sphincter laceration
Is there an at-risk population that would benefit from C-section?

- Calculated number of C-sections (5) needed to prevent 1 case of anal sphincter damage associated with operative vaginal delivery
- “At-risk” cohort: CPD, arrest of descent, maternal exhaustion, fetal distress

Antibiotic Prophylaxis

• 147 women with 3rd or 4th degree
  – 83 patients received IV placebo
  – 64 patients received 1 dose of IV cefotetan or cefoxitin or 900mg of clindamycin

• Wound complication (disruption/purulent discharge) was:
  – 8.2% in the women with antibiotic
  – 24.1% in those with placebo

References

- FitzGerald, et al for the Pelvic Floor Disorders Network. Risk factors for anal sphincter
References

References

Granville Health Systems
Oxford, NC

Decreasing Perineal Lacerations
Risk Factors for Perineal Lacerations

- Nulliparous
- Instrumental/operative vaginal delivery
- Prolonged second stage of labor
- Macrosomia >4 kg
- Occipitoposterior position at delivery
- Induction of Labor
- Epidural analgesia
- Shoulder Dystocia
- Asian or Pacific ethnicity
- Delivery in stirrups
- Episiotomy
References

• Instituteofmidwifery.org
• Aafp.org/online/etc/medialib./aafp/chapter2012
QUESTIONS?
Vidant Edgecombe Hospital
OB Collaborative Reminders

- Next Cohort 1 Content Webinar: May 13, 2013 at 1:00 PM
- February data due into QDS by March 20th
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