OBSTETRICS AND GYNAECOLOGY

QUALITY AND IMPROVEMENT PROJECT

Post-repair management and follow-up of women sustaining third- and fourth-degree perineal tears at Waikato Hospital

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Introduction

Vaginal delivery causes significant trauma to the perineum. Around 1% of all vaginal deliveries will be complicated by a third- or fourth-degree perineal tear [1]. A third degree perineal tear refers to injury to the perineum, involving the anal sphincter complex, while a fourth degree perineal tear refers to injury to the perineum involving the anal sphincter complex (EAS & IAS) and anal epithelium/mucosa [1].

The complications of patient's suffering 3rd or 4th degree perineal tears include:

1. Short-term sequelae:
    a. Perineal pain +/- wound dehiscence and infection
2. Long-term sequelae:
    a. Incontinence of flatus and faeces
    b. Faecal urgency
    c. Urinary incontinence
    d. Chronic perineal pain
    e. Dyspareunia
    f. Increase risk of rectovaginal fistula

The morbidity associated with the perineal trauma can be reduced via utilization of evidence based best practice guidelines.

A number of QI audits around management of 3rd and 4th degree perineal tears have been done at Waikato Hospital. Galley (2011) notes that despite this, no changes appear to have been implemented. This audit is a continuation of those – to compare findings over time, and to recommend changes as appropriate. A brief summary of the previous audits can be seen in the appendix Table 1.

We implement the quality cycle devised by the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG). Of the 7 stages, this audit addresses stages 1-4 (from identifying an area for improvement through to developing an action plan).

Step One: Identify an area for improvement

Question: Are women who sustain third- or fourth-degree perineal tears during labour receiving post-repair management and follow-up that is consistent with best practice?

This audit topic was one suggested by the O&G department at Waikato Hospital. As Waikato has neither a protocol nor a perineal tear clinic, discussion of the correct management of these women is pertinent and relevant. This audit aims to determine how closely the post-operative management of these adheres to best practice as defined by the Royal College of Obstetricians and Gynaecologists (RCOG), and use of New Zealand specific ACC forms guided by the Auckland National Women's guidelines.

AIMS:

- To improve the management and follow-up of women with 3rd or 4th degree perineal tears, and thus the associated morbidity

OBJECTIVES:

- To audit how closely Waikato Hospital follows the RCOG guidelines regarding follow-up and post-operative management of women with third- or fourth-degree perineal tears
- To identify the limitations of current practice in Waikato Hospital
- To recommend changes to practice where appropriate

Step Two: Develop Standards

The standards are from the RCOG guidelines, as well as the National Women's guidelines.

1. Standard one:
    a. Criterion: "All women who have had obstetric anal sphincter repair should be reviewed 6-12 weeks postpartum by a consultant obstetrician and gynaecologist." [1]
    b. Target : 100%
2. Standard two
    a. Criterion: "All women should be offered physiotherapy and pelvic floor exercises for 6-12 weeks after obstetric anal sphincter repair." [1]
    b. Target: 100%
3. Standard three
    a. Criterion: "The use of broad-spectrum antibiotics is recommended following obstetric anal sphincter repair to reduce incidence of post-operative infections and wound dehiscence." [1]
    b. Target: 100%
4. Standard four
    a. Criterion: "The use of post-operative laxatives is recommended to reduce the incidence of post-operative wound dehiscence" [1]; to avoid mechanical disruption of the repair. [5]
    b. Target: 100%
5. Standard five
    a. Criterion: All women who have had obstetric anal sphincter repair for 3rd and 4th degree tears attributable to treatment related injury e.g. episiotomies/instrumentation will have ACC forms filled up for them to enable funding for future treatment. [3]
    b. Target 100%

No exclusions identified.

Step Three: Confirm Opportunity for Improvement

First we reviewed the previous audits done at Waikato Hospital by Trainee Interns regarding the post-operative management of third- and fourth-degree perineal tears. We identified the last date patients were involved in these audits (31/1/2011). The Clinical Audit Support Unit (CASU) provided a list from Enterprise Reporting System for all women between 1/2/2011-3/6/2013 (twelve weeks before the date of the conduction of the audit) for the following codes:

1. O702: Third degree perineal laceration during delivery
2. O703: Fourth degree perineal laceration during delivery

This yielded a list of 159 patients. 23 people excluded (10 duplicate numbers, 9 missing notes, 4 were actually 2nd degree tears).

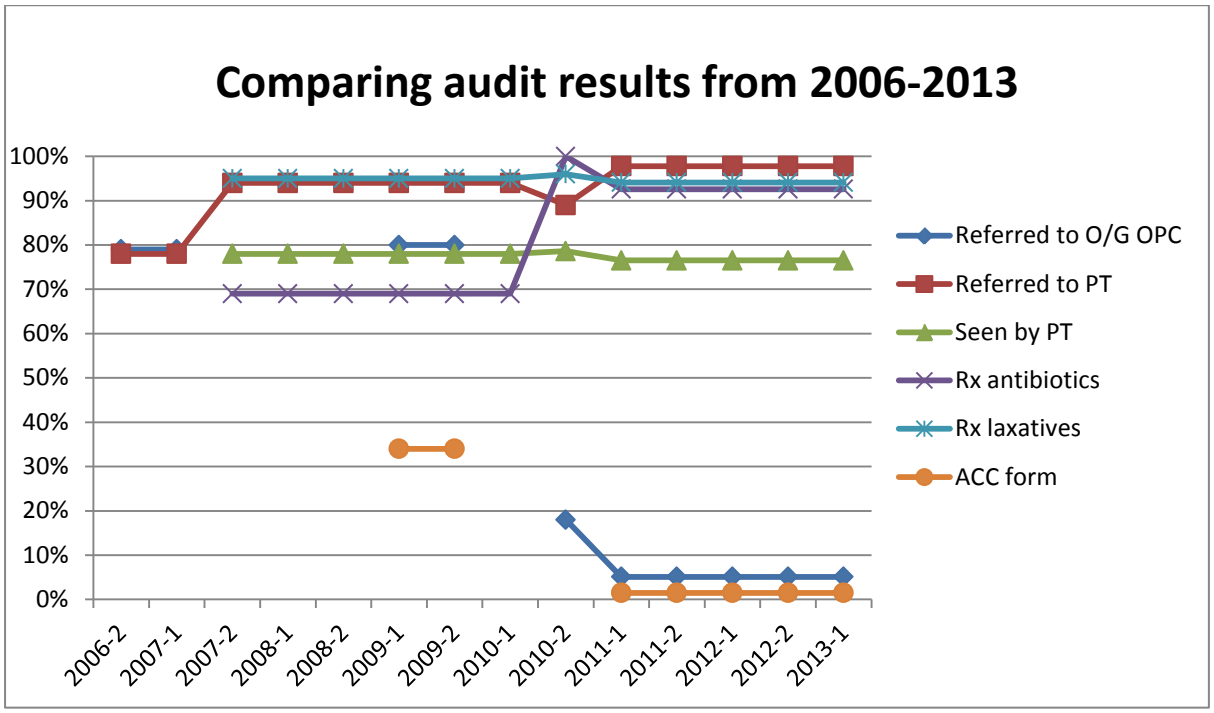
Method of data collection:

1. We went through the electronic data – looking at physiotherapist letters, the operation notes, and the appointment dates & status.

2. For those that had no electronic operation notes, or if in the electronic operation notes it wasn't specified if post-operative antibiotics/laxatives were used, then we went through the hard copy patient files.
3. All data was gathered and entered into a Microsoft Excel spread sheet.
4. This data was then compared to the data gleaned by the previous audits.

Data analysis and interpretation:

Of the 159 women included in the analysis, 23 were excluded, leaving 136.



Standard Being Assessed	Results
Standard 1: Being seen in O/G OPC:	5.1% of women had referrals mentioned in the post-op plan.
Standard Two: Physiotherapy	97.8% of the patients received referral to physiotherapy, but only 76.5% of the patients were seen by physiotherapy.
Standard Three: Antiobiotics	92.6% had post-operative antibiotics
Standard Four: Laxatives	94.1% had post-operative laxatives
Standard Five: ACC Forms	1.5% (2) had ACC forms completed.

Summary of results:

1. Only 5.1% of the patients received O/G OPC referral, which is much lower than the previous audits. It is important to acknowledge other referrals done in this stead: patient to LMC/GP in 6-12 weeks, to refer to O/G OPC if symptomatic; to be seen in ANC next pregnancy to discuss mode of delivery. There were some notes in response to GP referrals saying that they wouldn't see the patient until about 3/12, because no effective intervention/advice could be offered until then.
2. High percentages of patients received laxatives, antibiotics, and PT referral. However, compared to previous audits, not much improvement in % and still some ways from the target of 100%.

3. The management of 3rd degree/4th degree tears in Waikato hospital is not consistent with best practice as outlined above.
4. It is not possible to comment on the validity of the ACC forms, as the tears being attributable to treatment related injury was not assessed. However, it is a significant drop from when this was last audited.

Step Four: Action plan

There is room for improvement around post-operative management of post-operative perineal tears. Per RCOG guidelines, our number one recommendation is as follows: "Local protocols should be implemented regarding the use of antibiotics, laxatives, examination and follow-up of women with obstetric anal sphincter repair" [1]. This would provide clear guidelines around post-operative follow-up, and could consider emphasis on the ACC form. Having a local protocol would also allow clarity around whose responsibility it is for each step of post-operative management and follow-up, to minimize women being lost to follow-up.

Strengths

1. Clearly defined population with specific inclusion criteria
2. Large sample size
3. The diligence and wit of the Trainee Interns involved in the audit
4. Data collected from two sources: electronic and paper clinical notes.

Weaknesses:

1. Didn't look closely at the antibiotic prescribed to see if it was broadspectrum or not
2. Missing documentations
3. Time and practical constraints allowing only a limited sample size.
4. Did not assess if ACC forms were warranted.
5. Each audit wasn't conducted in the same manner, and therefore isn't entirely accurate to compare results
6. Long-term sequelae and outcomes in conjunction with each management not studied.

Suggested further audit:

1. To re-audit these same standards each year to track WDHBs management of this topic
2. To audit standards specific to the guidelines WDHB develops
3. To audit what proportion of these tears can be attributable to epiotomies/instrumentation etc, and so accurately assess the extent to which the ACC pathway is correctly utilized.
4. What proportion of women found benefit in their physiotherapist referral

References:

[1] Royal College of Obstetricians and Gynaecologists. (01/03/2007). The management of third- and fourth-degree perineal tears (Green-top Guideline No.29). Accessed online from: http://www.rcog.org.uk/files/rcog-corp/GTG2911022011.pdf (11/8/2013).

[2] Obstetric Director in Cantebury DHB. (November, 2010). Third and fourth degree tears (Guidelines from Canterbury DHB, under Women's & Children's Health). Christchurch: Canterbury DHB. Accessed online from: http://www.cdhb.govt.nz/cwh/maternity/mat_guide/linked_content/WCHGLM0036-3-4th-Degree-Perineal-Tear-Guidelines.pdf (11/8/13).

[3] Auckland DHB. (December 2011). Perineal Tears – Third and Fourth Degree (Guidelines from Auckland's National Women's). Auckland: Auckland DHB. Accessed online from: http://nationalwomenshealth.adhb.govt.nz/Portals/0/Documents/Policies/Perineal%20Tears%20-%20Third%20and%20Fourth%20Degree_.pdf (11/8/13).

[4] Marsh, F, et al. Obstetric anal sphincter injury in the UK and its effect on bowel, bladderand sexual function. European Journal of Obstetrics and Gynaecology and Reproductive Biology. 154, 2011, pp. 223-227.

[5] Mahony, R, et al. Randomized, clinical trial of bowel confinement vs laxative use after primary repair of a 3rd degree obstetric anal sphincter tear. Diseases of Colon and Rectum. 2004, Vol 24, 1, pp. 12-17.

Appendix

Table 1

Author (year): time period covered, number of cases audits	**Standards assessed, and results**
Low (2007): 1/9/2006-28/2/2007, audited 67 cases	a. Referring patients for physiotherapy, with 78% being referred b. Referral for O/G OPC within 6-12 weeks post repair, 79% referred.
Hickey & Hite (2010): 1/1/2007-31/12/2009, audited 374 cases	a. To be repaired in OT: 88% of 3rd degree in theatre; 100% of 4th degree. b. Post-operative antibiotics: 3rd degree: 68% had antibiotics, and 84% for 4th degree c. Post-operative laxatives: 95% for all women d. Referral to PT: 3rd degree 95% were referred (16% DNAd), while 77% of 4th degree (18% DNAd). e. Referral to O/G OPC: 3% of 3rd degree tears, and 12% of 4th degree tears
Hemstapat (2010): 2009, audited 105 cases	a. Referral for O/G OPC within 6-12 weeks post repair, with 80% meeting this target b. Completion of an ACC 2152 and ACC 45 form for each patient, 34% meeting this target.
Galley (2011): 1/8/2010 – 31/1/2011, audited 28 cases	a. Post operative antibiotics: 100% achieved b. Post operative laxatives: 96% achieved c. Referral for physio: 89% referred (only 79% seen) d. O/G OPC: Only 18% referred, only 4% seen.