Clinical Guideline
South Australian Perinatal Practice Guidelines – third and fourth degree tear management

Policy developed by: SA Maternal & Neonatal Clinical Network
Approved SA Health Safety & Quality Strategic Governance Committee on: 10 June 2014
Next review due: 30 June 2017

Summary
Clinical practice guideline for the management of third and fourth degree tear

Keywords
fourth, third, second, perineal, anal sphincter, macrosomia, episiotomy, shoulder dystocia, pudendal, vulval, vaginal, peri-anal rugae, sphincter muscles, pelvic floor, Perinatal Practice Guidelines, third and fourth degree tear management, clinical guideline

Policy history
Is this a new policy? N
Does this policy amend or update an existing policy? Y
Does this policy replace an existing policy? Y
If so, which policies?
Management third and fourth degree tear

Applies to
All SA Health Portfolio
All Department for Health and Ageing Divisions
All Health Networks
CALHN, SALHN, NALHN, CHSALHN, WCHN, SAAS
Other

Staff impact
N/A, All Staff, Management, Admin, Students, Volunteers
All Clinical, Medical, Nursing, Allied Health, Emergency, Dental, Mental Health, Pathology

PDS reference CG143

Version control and change history

<table>
<thead>
<tr>
<th>Version</th>
<th>Date from</th>
<th>Date to</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>27 Apr 2004</td>
<td>21 Apr 2009</td>
<td>Original version</td>
</tr>
<tr>
<td>2.0</td>
<td>21 Apr 2009</td>
<td>17 June 2014</td>
<td>Reviewed</td>
</tr>
<tr>
<td>3.0</td>
<td>17 June 2014</td>
<td>Current</td>
<td></td>
</tr>
</tbody>
</table>

© Department for Health and Ageing, Government of South Australia. All rights reserved.
South Australian Perinatal Practice Guidelines

third and fourth degree tear management

© Department of Health, Government of South Australia. All rights reserved.

Note

This guideline provides advice of a general nature. This statewide guideline has been prepared to promote and facilitate standardisation and consistency of practice, using a multidisciplinary approach. The guideline is based on a review of published evidence and expert opinion.

Information in this statewide guideline is current at the time of publication.

SA Health does not accept responsibility for the quality or accuracy of material on websites linked from this site and does not sponsor, approve or endorse materials on such links.

Health practitioners in the South Australian public health sector are expected to review specific details of each patient and professionally assess the applicability of the relevant guideline to that clinical situation.

If for good clinical reasons, a decision is made to depart from the guideline, the responsible clinician must document in the patient’s medical record, the decision made, by whom, and detailed reasons for the departure from the guideline.

This statewide guideline does not address all the elements of clinical practice and assumes that the individual clinicians are responsible for discussing care with consumers in an environment that is culturally appropriate and which enables respectful confidential discussion. This includes:

- The use of interpreter services where necessary,
- Advising consumers of their choice and ensuring informed consent is obtained,
- Providing care within scope of practice, meeting all legislative requirements and maintaining standards of professional conduct, and
- Documenting all care in accordance with mandatory and local requirements

Literature review

> Obstetric anal sphincter injury encompasses both third and fourth degree perineal tears and can occur with an intact perineum

> In South Australia in 2010, third and fourth degree tears occurred in 3.4 % (n=450) of vaginal births

> Prospective studies using postpartum anal endoanal sonography suggest that almost one third of primiparous women may sustain occult anal sphincter injury following vaginal birth

> Recent randomised controlled studies of external anal sphincter (EAS) repair have reported low incidences of anal incontinence symptoms (e.g. loss of control over flatus, faecal urgency and staining) with 60 – 80 % of women asymptomatic at 12 months

> Damage to the innervation of the sphincter muscles and pelvic floor may be related to pudendal nerve damage

Classification of tears

First Degree:

> Injury to the perineal skin only

Second Degree:

> Injury to the perineum extending into the perineal muscles but not the anal sphincter (either external [EAS] or internal anal sphincter [IAS])

Third degree:

> Injury to the perineum involving the anal sphincter complex:
  > 3a: Less than 50 % of EAS thickness torn
  > 3b: More than 50 % of EAS thickness torn
  > 3c: Both EAS and IAS torn
Fourth Degree:
> Disruption of the anal sphincter complex (EAS and IAS) and anal epithelium\(^7\). Occasionally there can be an anal or rectal mucosa tear behind an intact sphincter. Rectal examination before repair is recommended\(^7\)

Risk factors
> First vaginal birth
> Instrumental delivery
> Prolonged second stage
> Macrosomia > 4 kg
> Midline episiotomy
> Occipitoposterior position at delivery
> Induction of labour
> Epidural analgesia
> Shoulder dystocia

> Most of the above risk factors cannot readily be used to prevent or predict the occurrence of a third or fourth degree tear\(^4\)
> Damage to the pudendal nerves is cumulative in successive vaginal births\(^6,8,9\)

Management of Repair
> All women should be examined following vaginal birth to assess the degree of vaginal, perineal or rectal injury
> All sphincter damage must be identified, documented and treated appropriately
> This includes:
  > partial sphincter tears
  > sphincter damage with an intact perineum
  > “buttonhole” rectal mucosa tears
> Accurate diagnosis will mean that these women will have the best chance of normal anal function in years to come

Diagnosis of third and fourth degree tear
All women delivering vaginally should have:

> Informed verbal consent explaining the need for thorough examination of the vagina, vulva and perineum and why a per rectum examination may be required
> Good exposure and good lighting
> Good analgesia
> Vulval and vaginal examination
> The normal pattern of peri-anal rugae confirmed
> Rectal examination for all episiotomies or if tear extending to anal verge
> Direct visualisation of sphincter with digit in rectum
> Palpation of sphincter with digit in rectum and pill rolling action with thumb on sphincter

Recommended method for repair
> Third and fourth degree repairs should be undertaken by an obstetrician or a registrar trained to repair third and fourth degree tears after discussion with a consultant
> 3a tears may be repaired in labour and delivery if there is adequate analgesia
> All 3 b and c and fourth degree tear repairs should be carried out in theatre with adequate regional anaesthesia to facilitate adequate analgesia, good visualisation and relaxation
sphincter muscles

**Recommended antibiotic cover**

- Give single IV doses of both cephalozin 2 g and metronidazole 500 mg

**Allergy to penicillin**

- Single IV doses of clindamycin 450 mg, AND gentamicin 5 mg / kg

**Repair technique**

- Perform a repeat detailed assessment of the degree of vaginal / perineal / rectal injury under anaesthesia
- Ends of EAS should be mobilised by sharp and blunt dissection to facilitate a tension free repair
- When repairing the EAS, use either monofilament sutures such as 2-0 polydioxanone (PDS or Maxon) (DON'T USE Vicryl)
- For repair of complete tear of the EAS, either an overlapping or end-to-end (approximation) method can be used. Overlapping repair is preferred by most Obstetric Consultants specialising in the management of anal sphincter injury and Colorectal Surgeons; however, there is no level I evidence to support this
- Where the IAS can be identified, it is advisable to repair separately with interrupted sutures. When repairing the IAS, use fine suture size such as 3-0 PDS® and 2-0 Vicryl® (associated with less irritation and discomfort)
- 3a tears can only be repaired using an end-to-end repair
- Bury surgical knots beneath the superficial perineal muscles by performing a standard perineal repair to prevent knot migration to the skin
- Perform a rectal examination on completion to ensure the repair is intact
- Document the procedure in case notes and arrange postpartum follow up

**Role of colostomy**

- There is no clear consensus amongst colorectal surgeons on who requires Colostomy and no reliable data to base a decision on
- A Colostomy is not required for management of 3a, 3b and straightforward 3c tears
- A Colostomy is usually indicated with large 4th degree tears, especially when the tear extends above the levator muscles, or where other risk factors for fistula exist
- Consult with a colorectal surgeon regarding the need for a colostomy

**Postpartum Management**

**Bladder management**

- On average, bladder sensation takes between 6 to 7 hours to return after a vaginal birth with regional anaesthesia
- In cases of 3rd or 4th degree tear, severe perineal discomfort is known to cause urinary retention with a delay of up to 12 hours before bladder sensation returns
- Urinary catheterisation should occur following 3rd and 4th degree repair in the immediate postpartum period to minimise urinary retention. The optimum time for catheterisation after birth is uncertain. Careful attention should be paid to voiding after removal of the catheter, particularly in the first six hours after catheter removal (see postpartum bladder dysfunction)

**Antibiotics**

- The use of broad-spectrum antibiotic cover is recommended after obstetric anal sphincter repair to reduce the incidence of postoperative infections and wound dehiscence
- Commence oral Augmentin Duo Forte® (amoxicillin 875 mg and clavulanic acid 125 mg) 12 hourly with meals for 5 days
- If allergic to penicillin, use both
> oral ciprofloxacin 500 mg 12 hourly for 5 days

plus

> oral clindamycin 450 mg 8 hourly for 5 days

**Breastfeeding:** All these drugs are acceptable

**Analgesia and other measures**

> Use a multimodal approach to minimise the use of opioid medication, i.e. oxycodone and codeine containing analgesics, as they may cause constipation

> Administer oral paracetamol 1 g every 6 hours as required

> If there are no contra-indications, administer diclofenac (Voltaren®) 100 mg suppository per rectum at the end of the procedure while the patient is in the lithotomy position. Subsequent doses can be administered orally (i.e. 50 mg TDS), commencing no sooner than ten hours after administration of the intra-operative dose

> Ice packs and resting supine / prone for 10 - 20 minutes every 2 – 3 hours over the first week may decrease symptoms of pelvic floor fatigue (e.g. swelling, pain and perineal descent)

> Bulking agents and stool softeners (e.g. Fybogel® 1 sachet three times a day, Lactulose® 20 mL twice daily, and Coloxyl® 120 mg 1-2 nocte in addition as required) are recommended. Commence after 24 hours and continue for two weeks before weaning off. Educate the woman about the need for adequate fluid intake when using bulking agents

> In patient referral to a continence health professional (e.g. continence nurse advisor / practitioner or physiotherapist) for advice about defecation techniques, pelvic floor care and ongoing support

> Before discharge, the woman must be fully informed about the nature of her injury, associated risks (see Table 1 below) and benefits of follow-up

**Follow – up (at 6 weeks)**

> A third or fourth degree tear is a significant peri partum event. Postpartum, follow-up by a consultant with an interest in management of third and fourth degree tears and a continence health professional referral is required. If the woman is experiencing incontinence or pain at follow-up, a colorectal opinion and investigation (endoanal ultrasound) may be necessary

> Establish the following:

  > Control of bowel motions
  > Control of flatus
  > Faecal urgency
  > Offensive vaginal discharge (this may suggest a fistula)
  > Confirm urinary continence
  > Assess pelvic floor muscles
  > Assess ongoing perineal discomfort

> The mode of subsequent delivery should be discussed in the context of current symptoms or findings of postpartum sonography

**Recommendations about future pregnancies**

> Women who are asymptomatic may consider a vaginal birth

> Advise the woman that there is no evidence to support the role of prophylactic episiotomy in subsequent pregnancies

> Recommend LSCS:

  > Symptomatic
> Previous 4th degree tear
> Delayed surgical correction of sphincter damage
> Other risk factor for sphincter damage (e.g. big baby, occipito posterior position)
> Woman’s request

> It is appropriate to warn women that the cumulative effect of ageing, menopause and progression of neuropathy on long term sphincter weakness by the fifth and sixth decade may result in the new onset of symptoms for which treatment is available

Table 1: Complications associated with 3rd and 4th degree tears

<table>
<thead>
<tr>
<th>Serious risks</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Incontinence of faeces / flatus</td>
<td>Common</td>
</tr>
<tr>
<td>Need for LSCS in future pregnancies due to persistent symptoms of incontinence or abnormal anal sphincter structure or function</td>
<td>Uncommon</td>
</tr>
<tr>
<td>Haematoma</td>
<td>Rare</td>
</tr>
<tr>
<td>Consequences of failure of the repair requiring the need for further interventions e.g. secondary repair or sacral nerve stimulation</td>
<td>Rare</td>
</tr>
<tr>
<td>Rectovaginal fistula</td>
<td>Very rare</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequent risks</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fear, difficulty and discomfort in passing stools in the immediate postpartum period</td>
<td></td>
</tr>
<tr>
<td>Migration of suture material requiring removal</td>
<td></td>
</tr>
<tr>
<td>Granulation tissue formation</td>
<td></td>
</tr>
<tr>
<td>Faecal urgency</td>
<td>26/100 Very common</td>
</tr>
<tr>
<td>Perineal pain and dyspareunia</td>
<td>9/100 Common</td>
</tr>
<tr>
<td>Wound infection</td>
<td>8/100 Common</td>
</tr>
<tr>
<td>Urinary infection</td>
<td></td>
</tr>
</tbody>
</table>

Adapted from RCOG Consent advice No. 9, repair of third and fourth degree perineal tears following childbirth

RCOG: Presenting information on risk

<table>
<thead>
<tr>
<th>Term</th>
<th>Equivalent numerical ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very common</td>
<td>1/1 to 1/10</td>
</tr>
<tr>
<td>Common</td>
<td>1/10 to 1/100</td>
</tr>
<tr>
<td>Uncommon</td>
<td>1/100 to 1/1,000</td>
</tr>
<tr>
<td>Rare</td>
<td>1/1,000 to 1/10,000</td>
</tr>
<tr>
<td>Very rare</td>
<td>Less than 1/10,000</td>
</tr>
</tbody>
</table>

Based on the RCOG Clinical Governance Advice, Presenting information on Risk
References:


Useful resources


Abbreviations

ISBN number: 978-1-74243-162-8
Endorsed by: South Australian Maternal & Neonatal Clinical Network
Last Revised: 17/6/14
Contact: cywhs.perinatalprotocol@health.sa.gov.au
Version control and change history

**PDS reference:** OCE use only

<table>
<thead>
<tr>
<th>Version</th>
<th>Date from</th>
<th>Date to</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>21 Jul 04</td>
<td>25 Jan 05</td>
<td>Original version</td>
</tr>
<tr>
<td>2.0</td>
<td>25 Jan 05</td>
<td>27 Oct 09</td>
<td>Reviewed</td>
</tr>
<tr>
<td>3.0</td>
<td>27 Oct 09</td>
<td>20 Mar 12</td>
<td>Reviewed</td>
</tr>
<tr>
<td>4.0</td>
<td>20 Mar 12</td>
<td>17 June 14</td>
<td>Reviewed</td>
</tr>
<tr>
<td>5.0</td>
<td>17 June 14</td>
<td></td>
<td>Current</td>
</tr>
</tbody>
</table>

et al. | And others
EAS    | External anal sphincter
e.g.   | For example
g    | Gram(s)
IAS    | Internal anal sphincter
IV     | Intravenous
mg     | Milligrams
n     | Number
%     | Percent
®     | Registered trademark
RCOG  | Royal College of Obstetricians and Gynaecologists