Perineal tears – A review

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Background
The female perineum is the diamond-shaped inferior outlet of the pelvis. This structure is at risk of trauma during labour because of spontaneous perineal tears of varying degrees or iatrogenic episiotomies. These injuries can result in disabling immediate and long-term complications in the woman.

Objective
The aim of this article is to provide general practitioners (GPs) with a good understanding of perineal tears by discussing the different classifications, immediate and long-term management, and recommendations for future deliveries.

Discussion
Although the majority of perineal tears are managed by obstetricians and gynaecologists, it is important for GPs to understand their management in the event that a patient presents to general practice with concerns during the antenatal or postpartum period.

THE FEMALE PERINEUM is the diamond-shaped inferior outlet of the pelvis, bordered by the pubic symphysis anteriorly and the coccyx posteriorly.[1] Perineal trauma involves any type of damage to the female genitalia during labour, which can occur spontaneously or iatrogenically (via episiotomy or instrumental delivery).[2] Anterior perineal trauma can affect the anterior vaginal wall, urethra, clitoris and labia. Posterior perineal trauma can affect the posterior vaginal wall, perineal muscle, perineal body, external and internal anal sphincters, and anal canal. During labour, the majority of perineal tears occur along the posterior vaginal wall, extending towards the anus. These are further described in Box 1.[2–4]

Epidemiology

More than 85% of females who undergo a vaginal birth will suffer from some degree of perineal tear,[2] with 0.6–11% of all vaginal deliveries resulting in a third-degree or fourth-degree tear.[5–7] Fortunately, the incidence of perineal tears decreases with subsequent births, from 90.4% in women who are nulliparous to 68.8% in women who are multiparous undergoing vaginal deliveries.[4]

Risk factors

While there is a high risk for perineal trauma following any vaginal birth, it is particularly important to note the risk factors that contribute to severe perineal tears (third-degree and fourth–degree). The risks can be best separated into the following subgroups: maternal, fetal and intrapartum risk factors (Box 2).[4,7–16]

Prevention

Episiotomy

Given that an episiotomy is considered to be a method to adequately reduce the rates of severe perineal tears, it is important to explore this 'prophylactic measure' in further detail. The aim of episiotomy is to increase the diameter of the vaginal outlet to facilitate the passage of the fetal head and, ideally, prevent a vaginal tear.[17] Many different types of episiotomy incisions can be used, depending on the situation: midline, modified-midline, mediolateral, 'J'-shaped, lateral, radical lateral and anterior.[18] In Australia, the mediolateral episiotomy is generally preferred.

Despite its common use in obstetrics, there is still conflicting evidence about the effectiveness of mediolateral episiotomy in the prevention of obstetric anal sphincter injuries (OASI). Depending on the study, the mediolateral episiotomy has been found to lower the incidence of OASI in spontaneous vaginal deliveries.[19] Other studies, however, have found that episiotomies were not protective against severe perineal lacerations,[8,9,20] and can actually increase the risk of third-degree and fourth-degree perineal tears in women who are multiparous.[20] This is potentially due to the difficulty in correctly estimating the episiotomy angles in patients, as perineal distension occurs at crowning of the fetal head.[11,17]

A recent Cochrane review concluded that 'routine' episiotomy is not justified for women in whom no instrumental delivery is intended.[21] For this reason, The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) does not promote the routine use of episiotomies, and advises that an episiotomy is only recommended if there is:[22]

- a high likelihood of third-degree or fourth-degree perineal tear
- soft tissue dystocia
- a requirement to accelerate delivery of a compromised fetus
- need to facilitate operative vaginal delivery or
- a history of female genital mutilation.

Other techniques

There are many other types of techniques used in obstetrics that have also been used as prophylactic measures for severe perineal tears. In a 2017 Cochrane review,[23] several perineal techniques were assessed, including warm compresses, perineal massage, hands on the perineum and Ritgen's manoeuvre. Surprisingly, only the warm compresses and perineal massage showed a positive effect in reducing third-degree and fourth-degree perineal tears.[23] Hands on the perineum and Ritgen's manoeuvre showed no reduction in the incidence of third-degree and fourth-degree tears when compared with a 'hands-off' approach and standard care respectively.[23]

Diagnosis

The perineum should always be thoroughly assessed after a vaginal birth to determine the presence of any lacerations. This examination should include a digital rectal examination to evaluate the tone of the anal sphincter.[7] From here, the midwife or obstetrician can decide if conservative or surgical management is required.

Although not a routine practice in Australia, if there is difficulty in diagnosing perineal trauma during the puerperium period, ultrasound investigation of the perineum has been shown to be an effective diagnostic tool.[24]

Repairing perineal tears

Management of a perineal tear differs depending on the severity of the tear and is described in Box 3.

Regardless of the severity of the tear, the following principles should be applied during the repair:[7,25]

- The repair should be completed by an experienced clinician, ideally one trained in obstetrics.
- Good lighting and access are important – ideally, the procedure should be conducted in an operating theatre with the patient in lithotomy.
- Adequate anaesthesia should be used.
- Each layer should be repaired independently to restore function.
- The repair should be conducted in a cephalocaudal (or top-down) direction as this ensures access to superior sites is not restricted.
- Resorbable sutures should be used, with the knots of each layer buried as this reduces the risk of dyspareunia and vaginal discomfort following the recovery.

Postoperative management

Antibiotics

Broad-spectrum antibiotics are recommended in the immediate postoperative period to reduce the risk of infections and wound dehiscence.[25]

Analgaesia

Cold packs should be used topically in 10–20 minute intervals in the first 24–72 hours after surgery.[26] Paracetamol and nonsteroidal anti-inflammatory drugs (NSAIDs) can be used.[27] However, limit the use of opioids to reduce the risk of constipation. A urinary alkaliniser can assist in reducing discomfort during toileting.[28]

Laxatives or stool softeners

Laxatives are recommended following perineal repair as the passage of stool can result in wound dehiscence.[25] Stool softeners (eg lactulose) are recommended for around 10 days postoperatively.[29] Stool softeners should be titrated to keep the stools soft but not loose.[25]

Positioning and movement

During the first 48 hours after surgery, the patient should use positions that will reduce perineal oedema. This involves lying on a flatbed while resting, on their side when breastfeeding, and avoiding the overuse of seated positions.[28] The patient should also avoid activities that may increase intra-abdominal pressure for the first six to 12 months after delivery.[28]

Pelvic floor exercises

Pelvic floor exercises should be commenced two to three days postpartum, or when the patient feels comfortable.[25] Patients with third-degree or fourth-degree perineal tears should be referred to a physiotherapist who specialises in perineology, as it can reduce flatal, faecal and urinary stress incontinence.[30]

Wound care

Ensure that the wound is washed and patted dry after toileting. The patient should inspect the wound daily with the use of a hand mirror for any signs of wound breakdown.

Follow-up

Obstetrician follow-up

Generally, women with OASI repairs are reviewed by the obstetrician six to 12 weeks postpartum,[25] when the repair site and anal sphincter tone are assessed.

Box 1. Classification of perineal tears[2–4]

Degree	Classification
1	Laceration of the vaginal mucosa or perineal skin **only**
2	Laceration involving the perineal muscles
3	Laceration involving the anal sphincter muscles, being further subdivided into 3A, 3B and 3C:
3A	Where <50% of the external anal sphincter is torn
3B	Where >50% of the external anal sphincter is torn
3C	Where the external and internal anal sphincters are torn
4	Laceration extending through the anal epithelium (resulting with a communication of the vagina epithelium and anal epithelium)

Box 2. Risk factors for perineal tears[4,7–16]

Maternal risk factors	Fetal risk factors	Intrapartum risk factors
Nulliparity	Large fetal weight (>4000 g)	Instrumental delivery (eg forceps, vacuum)
Asian ethnicity	Shoulder dystocia	Prolonged second stage of labour (>60 minutes)
Vaginal birth after caesarean section	Occipo-posterior position	Epidural use
≤20 years of age		Oxytocin use
Shortened perineal length (<25 mm)		Midline episiotomy
		Delivery in lithotomy or deep squatting position

General practitioner follow-up

The role of the general practitioner (GP) in the postpartum period will be to titrate the analgaesia and laxative/stool softener requirements to facilitate the woman's recovery, and to inspect the wound for signs of infection. The major indications for a referral to an obstetrician are:

- wound dehiscence
- severe dyspareunia
- constipation, including:
  - excessive straining
  - sensation of incomplete emptying
  - sensation of anorectal obstruction
  - digitation (manual disimpaction)
- faecal incontinence, including:
  - urge faecal incontinence
  - passive or post-defaecation incontinence.

Counselling

Prognosis

Fortunately, first-degree and second-degree perineal lacerations are minor and patients usually recover uneventfully. As third-degree and fourth-degree perineal tears are more extensive, there is an increased likelihood of residual defects resulting in ongoing symptoms that can have a significant impact on the woman's quality of life. The most common long-term problems are dyspareunia, perineal pain, and flatal and faecal incontinence.[31] In fact, OASI are strong risk factors for postponed coital resumption after delivery and dyspareunia at one year postpartum.[32] However, anal sphincter competence remains the biggest concern as flatal incontinence can be present even 10 years after OASI.[33] Despite these concerning potential outcomes following OASI, women should be reassured that 60–80% of women are asymptomatic 12 months after a delivery and an external anal sphincter repair.[25]

Future deliveries

Women who have sustained OASI in their previous pregnancy should be thoroughly counselled regarding their mode of delivery, with an elective caesarean section being one of the options.[25] If the woman chooses a vaginal delivery, it is important to note that there is insufficient evidence for prophylactic episiotomies in the prevention of another OASI, and should thus only be performed if clinically indicated.[25]

Resumption of sexual activity

There is currently no evidenced-based research demonstrating the ideal time to resume sexual intercourse following a perineal injury. Thus, the abstinence period is typically determined by the woman during her recovery period. The median time of return to intercourse is six to eight weeks postpartum.[34]

Dyspareunia

Dyspareunia is a common postpartum complaint that must be addressed early because of its impact on the woman's quality of life (ie physical, relational, psychological wellbeing). The following recommendations can be made:[25,28]

- Lubrication should be used generously during vaginal intercourse.
- The woman should be in control of the initiation of intercourse. If the woman is having difficulty obtaining control, consider having the discussion with the woman and her partner together.
- Experimenting with different sexual positions can facilitate the woman's comfort.
- Refer to a physiotherapist with a special interest in dyspareunia, or an obstetrician or gynaecologist.

Summary

GPs have an extremely important role in the management of women following perineal repair. This involves, but is not limited to, reassurance of a successful repair, early detection of complications for prompt referrals, and ascertaining and managing any psychological or physiological impact on the woman's wellbeing.

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Box 3. Immediate management of perineal tears

First-degree	These tears are considered minor and are therefore left to the clinician's discretion to determine if suturing is required.
Second-degree	Although these tears are also considered minor, sutures should be placed to facilitate better wound approximation (as there are noticeable benefits at six weeks postpartum[35]).
Third-degree and fourth-degree	These tears should be repaired as soon as possible in an operating theatre, using regional or general anaesthesia, to achieve anal sphincter relaxation.[7,25] The obstetric anal sphincter injuries repair should be performed by trained practitioners, as inexperienced attempts can lead to anal incontinence.[25]

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