

Treatment injury case study

Sharing information to enhance patient safety

July 2010 – Issue 24

EVENT: Delay in treatment

INJURY: Brain damage/injury

Case study

Nineteen-year-old Jo, who was expecting her first child, was receiving maternity care from a midwifery lead maternity caregiver (LMC).

Jo had no previous medical or gynaecological history of note. However, mid second trimester she began experiencing gradually worsening abdominal cramps.

During the next few weeks Jo contacted her midwife a number of times, initially about the cramps but also about vaginal leakage, which Jo had begun experiencing at 23 weeks. Jo explained that she was now wearing panty liners because of the discharge.

The midwife advised that no action was necessary, attributing the cramps to constipation and explaining that increased secretions are normal during pregnancy.

At 25 weeks Jo again called her midwife with concerns about the discharge and intermittent cramping. The midwife again reassured Jo, offering the same advice. Jo then decided to consult her GP about the abdominal pains and vaginal discharge, which had seemed thicker and greener in the preceding few days.

The GP performed an abdominal examination and took a lower vaginal swab (with results to be copied to the midwife). The GP also felt foetal movements and recorded the baby's heart rate as normal.

After the exam the GP reiterated the midwife's view that no action was warranted, but advised Jo to call again if she was still concerned.

During the next 24 hours Jo continued to have regular abdominal pain and vaginal discharge. Her midwife advised that she was experiencing Braxton Hicks contractions, and arranged to see Jo the next morning. However, Jo's pains worsened overnight and she had a bloody loss, so she went straight to hospital where a premature labour was diagnosed.

Jo was commenced on antibiotics, steroids and nifedipine, but progressed to a vaginal delivery of a severely premature male infant nine hours later. Vaginal swabs showed heavy growth of *Gardnerella vaginalis* (bacterial vaginosis [BV]) and placental histology showed evidence of chorioamnionitis.

Jo's baby, Joseph, had a stormy neonatal period and went on to develop cerebral palsy, for which a treatment injury claim was lodged.

Midwifery external clinical advice sought by ACC concluded that the key flags of increased leucorrhoea and cramping had been missed by the LMC, while external paediatric advice was that Joseph had sustained a brain injury that was likely secondary to the infection. ACC accepted the claim on the basis that Joseph's injury could have been avoided with earlier diagnosis, referral and treatment by the LMC.

Expert Commentary

Joyce Cowan RN, RM, MHSc (Hons)

This case study involves two clinical issues – threatened pre-term labour and the vaginal infection BV.

When Jo contacted her midwife several times between 23 and 25 weeks with concerns about abdominal pains and vaginal discharge, investigations were warranted to rule out threatened

Key points

- It's important to rule out threatened pre-term labour when a woman presents with uterine tightenings prior to 37 weeks
- Threatened pre-term labour should be investigated in hospital, where contractions can be monitored and foetal wellbeing assessed
- Bacterial vaginosis is associated with a raised risk of pre-term delivery
- Vaginal discharge is normally increased in pregnancy, but if associated with other symptoms, treatment could be indicated.

pre-term labour and to determine whether the discharge was normal or pathological (investigation of threatened pre-term labour is a level 2 referral). Prompt investigation and treatment at this time might have averted the sequence of events that led to the brain injury.

Threatened pre-term labour

While uterine tightenings (cramps) are common during pregnancy, they're not usually associated with significant discomfort until the onset of labour. If a woman presents with uterine tightenings prior to 37 weeks, therefore, it's important to rule out threatened pre-term labour.

Even common presentations of cramping abdominal pain, such as those associated with constipation, should not be overlooked.

In this case, Jo experienced gradually worsening abdominal cramps that continued until her admission to hospital.

Threatened pre-term labour should be investigated in a hospital, where contractions can be monitored, foetal wellbeing assessed, and a vaginal swab taken to test for the presence of foetal fibronectin in the cervico-vaginal fluid.

A positive result to the swab indicates the likelihood of progression to established labour in the next few days (1). Tocolytics can then be used to stop or delay labour, and antibiotics can be used prophylactically if pre-term labour becomes established.

Bacterial vaginosis (BV)

Leucorrhoea – an increase in the normal milky, almost odourless vaginal discharge – is common during pregnancy. However, leucorrhoea can also be caused by an infection. During pregnancy, it's important to identify if leucorrhoea has a pathological basis, as this warrants treatment.

Jo had experienced an increased vaginal discharge for two weeks prior to going into labour. Vaginal swabs taken two days before and at the onset of labour tested positive for *G. vaginalis*, one of the organisms responsible for BV.

BV is common in women of childbearing age and is readily diagnosed and treated. The infection can be asymptomatic, in which case there's insufficient evidence to support treatment (2). However, if increased discharge is accompanied by symptoms such as a strong fishy odour and pruritus, treatment is recommended (2).

In 2003, a meta-analysis of studies involving 20,232 women showed that BV doubles the risk of pre-term delivery (3). BV has also been associated with pre-term rupture of membranes, chorioamnionitis and endometritis (4). The morbidities and mortality associated with pre-term birth are increased as a result of BV infection in pregnancy (4).

According to the New Zealand Sexual Health Society guidelines, the recommended treatment for BV during pregnancy is Metronidazole 400mg BD orally for six days (5,6). Treatment is especially recommended if women have a history of pre-term birth (5).

In summary, this case shows the importance of:

- recognising the signs of pre-term labour
- distinguishing between a normal vaginal discharge during pregnancy and one that could be associated with risk.

References

1. Goepfert AR, Goldenberg RL, Mercer B et al. The preterm prediction study: quantitative fetal fibronectin values and the prediction of spontaneous preterm birth. The National Institute of Child Health and Human Development Maternal-Fetal Medicine Units Network. *Am J Obstet Gynecol* 2000; 183(6):1480-3
2. British Association for Sexual Health and HIV. National guideline for the management of bacterial vaginosis 2006. Available from <http://www.bashh.org/documents/62/62.pdf>
3. Leitch H, Bodner-Adler B, Brunbauer M et al. Bacterial vaginosis as a risk factor for preterm delivery: a meta-analysis. *Am J Obstet Gynecol* 2003; 189:139-47
4. Denney JM, Culhane JF. Bacterial vaginosis: a problematic infection from both a perinatal and neonatal perspective. *Semin Fetal Neonatal Med* 2009; 14(4):200-3
5. New Zealand Sexual Health Society. Best practice guidelines 2009. Available from <http://www.nzshs.org/guidelines.html>
6. Centers for Disease Control and Prevention. BV fact sheet. Available from <http://www.cdc.gov/std/bv/STDFact-Bacterial-Vaginosis.htm#Treatment>

Claims Information

Between 1 July 2005 and 31 March 2010, ACC received 96 claims for cerebral palsy or neonatal encephalopathy associated with maternity care, of which 43 were accepted (45%).

The most common reasons for declining a claim were that the injury was not caused by treatment, or that the injury was caused wholly or substantially by underlying health conditions.

About this case study

This case study is based on information amalgamated from a number of claims. The name given to the patient is therefore not a real one.

The case studies are produced by ACC's Treatment Injury Centre, to provide health professionals with:

- an overview of the factors leading to treatment injury
- expert commentary on how similar injuries might be avoided in the future.

The case studies are not intended as a guide to treatment injury cover.

Send your feedback to: TI.info@acc.co.nz

How ACC can help your patients following treatment injury

Many patients may not require assistance following their treatment injury. However, for those who need help and have an accepted ACC claim, a range of assistance is available, depending on the specific nature of the injury and the person's circumstances. Help may include things like:

- contributions towards treatment costs
- weekly compensation for lost income (if there's an inability to work because of the injury)
- help at home, with things like housekeeping and childcare.

No help can be given until a claim is accepted, so it's important to lodge a claim for a treatment injury as soon as possible after the incident. This will ensure ACC is able to investigate, make a decision and, if covered, help your patient with their recovery.