Sterile water injections for relief of back pain in labour – procedure for administration (GL919)

Approval

<table>
<thead>
<tr>
<th>Approval Group</th>
<th>Job Title, Chair of Committee</th>
<th>Date</th>
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<tbody>
<tr>
<td>Maternity &amp; Children’s Services Clinical Governance Committee</td>
<td>Chair, Maternity Clinical Governance Committee</td>
<td>5th February 2016</td>
</tr>
</tbody>
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Change History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Author, job title</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>July 2013</td>
<td>Ailsa Skinner (Registered Midwife), Annette Weavers (Consultant Midwife)</td>
<td>Introduction of practice to improve pain relief in labour following trial in-house</td>
</tr>
<tr>
<td>2.0</td>
<td>January 2016</td>
<td>Annette Weavers (Consultant Midwife)</td>
<td>Reviewed – pg. 2 Overview 2nd paragraph added</td>
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Maternity Guidelines – Sterile water injections for relief of back pain in labour (GL919)

Overview

Intradermal injections of sterile water for injections are an alternative analgesia for women experiencing severe lower back pain in labour. The technique is simple, safe and effective without any reported serious side effects to either the woman or the fetus. Studies have shown that women can experience pain relief that lasts from 10 minutes up to 2 hours post administration.

The reported studies include small numbers and NICE (2014) describe them as fair to good quality, because of this NICE does not currently recommend this as a form of pain relief. However there is a growing amount of interest locally and nationally in this alternative form of pain relief for women which has culminated in the commencement of multinational RCT and data collection is underway. It is recommended that we continue to offer this until the results of the larger study are known but make women aware of the limitations in the research.

1. Desired Outcome/Objective

To provide an alternative non pharmacological pain relief of lower back pain in labour by administration of intradermal injection of ‘sterile water for injections’ up to 0.4mls in four areas located over the sacral area.

2. Definitions

Intradermal: within the dermis (skin). Also known as intracutaneous.

Visual Analogue Score (VAS)/Numerical rating score (NRS): Assessment of pain using a scale of 1-10 with 0 being no pain and 10 being the worst pain.

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<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<th>7</th>
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<tr>
<td>no pain</td>
<td>mild</td>
<td>moderate</td>
<td>severe</td>
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3. Indications for use

Women in labour experiencing lower back pain and with VAS/NRS OF >6.

4. Issues to Consider

- The success of this form of pain relief depends on the sterile water being given via intradermal route. Midwives must be familiar with the technique to avoid accidental subcutaneous injection which is not as effective.
- Sterile water is effective at relieving severe back pain. It is does not relieve other pain.
5. Equipment required

- 1ml syringes and injection tray
- 25g needle (orange)
- Sterile water for injection
- Alcohol wipes
- Gloves
- Sharps container

6. Procedure

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<th>Process</th>
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<td>1. Assess the woman’s need for procedure including the use of the VAS</td>
<td>• Found to be more effective when VAS&gt;6 but can still be given if &lt;6.</td>
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| 2. Explain procedure to the woman and obtain verbal consent. | • Ensure women know there will be intense burning/stinging for up to 30 seconds following injection and that pain relief should occur with 1-3 minutes.  
  • Ensure women know that this procedure is effective at *relieving severe back pain only*.  
  • Ensure women know this procedure is effective for 90% of women. |
| 3. Ask the woman to adopt a position that is comfortable for her but provides easy access to her sacral area | • Leaning over seems to work |
| 4. Gather and prepare equipment. Draw up 0.2–0.8ml sterile water in a syringe. | |
| 5. Identify the injection sites and mark with pen if desired (see enclosed diagrams/pictures in appendix) | • Stand behind the woman to identify landmarks: place the palms of your hand around the woman’s hips with index finger at level of anterior superior iliac spines; align your thumbs to the same level as your index fingers over the sacral area. This marks the area for the superior injections.  
  • Lower injections should be placed 2-3cm below and 1-2 cm medial to the superior injection site. |

**Figure 1**

Note: Absolute accuracy is not critical to success of procedure
### Clean sites with alcohol wipes
- To reduce chance of infection

### Rapidly inject 0.1 - 0.4ml of sterile water intradermal at each site to raise a small bleb (at least 0.5cm diameter see figure 3 in appendix) in the skin.

**Do not wipe the sites after injections**

- Injections can be given between or with contractions. Firstly administer two higher injections either side of the back to allow the woman to assess if the burning/stinging sensation is acceptable. If the woman agrees, the lower injections can be given.
- Administer as quickly as possible to reduce time and effect of stinging
- Stinging subsides usually after 15-20 seconds
- If the woman declines the lower injections research has indicated that two injections can still give pain relief

### Discard sharps
- Prevent needle stick injuries

### Observe the woman for effectiveness of procedure. Document woman’s consent, pain score (VAS/NRS) pre and post procedure and time of injections
- Audits woman’s satisfaction
- Document procedure in notes.

### Avoid touching, rubbing, massaging or any other counter pressure to the injection sites for 30 minutes following the procedure
- Interferes with effectiveness of procedure

### Procedure can be repeated after 30-60 mins and as often as necessary.

All midwives undertaking this technique will undergo training with a midwife already using this in her practice. The training will include discussion of the technique and having your first attempt witnessed by the midwife.
Appendix 1

Figure 2 pictures from Reynolds JL (1994) Intracutaneous sterile water for back pain in labour. Canadian Family Physician Vol 40 p 1785-1788

Identify landmarks, place palms around the woman’s hips, index finger at level of anterior superior iliac spines and bring thumbs to align with index fingers. This marks level for superior injections.

Lower injections should be placed 2-3cm below and 1-2cm medial to the above. Mark on skin if helpful.
Rapidly inject 0.1 - 0.4ml of water intradermally at each site to raise a small bleb (at least 0.5cm diameter) in the skin. **Do not wipe sites after injections**

Administer as quickly as possible to reduce time and effect of stinging.

7. **Auditable Standards**

   Repeat original audit in 2016.
8. References

1. The Newcastle upon Tyne Hospitals NHS Foundation Trust (2011) Use of sterile water papules for relief of back pain caused by occipito-posterior positions guideline written by Blair E.


5. Peart K., James W., & Deocampo J. Women’s satisfaction with the use of sterile water injections for back pain in labour. University of Ballarat.

