TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION (TENS)

1. AIM

To provide an alternative/complementary non-pharmacological method of pain relief throughout labour

2. PATIENT

Woman in labour

3. STAFF

Medical and midwifery staff

4. EQUIPMENT

- TENS machine
- TENS wires
- TENS disposable electrodes/pads

5. CLINICAL PRACTICE

- Do not use TENS in the following situations:
  - Woman under 37 weeks who is not in established labour
  - Woman who has an epidural block or is using water in labour
  - Woman fitted with a cardiac pacemaker
  - Woman with epilepsy
  - Women with undiagnosed pain
  - Woman who has a fetal electrode in situ
- Provide instruction to woman on use of TENS
- Ensure the skin where the pads are applied is clean and dry and there are no cuts, grazes or areas of skin irritation.
- Secure pads with tape if lifting occurs.
- Ensure the machine is switched off before placing the electrode pads on the skin.
- Place pre-gelled electrodes at level T10-L1 and/or S2-S4 on either side of the spine (Diagram 1). The pads should not be put within 2-3 cm of each other.
- Turn on unit
- Press channel “A” button until an intense but comfortable tingling sensation is felt and repeat for channel “B” if using both channels.
  - Use “+” or “–“ button to increase or decrease sensation
  - There should be no muscle contraction. If this occurs this means the intensity is too high
- Advise woman she can press the hand held boost at the onset of a contraction to increase intensity by 20%
  - If this is too intense woman can press the “–“ button
  - At the end of each contraction the boost control is turned back down by pressing the “Rest” mode button on the hand held booster
- Turn TENS machine off before peeling electrodes off the skin when woman wishes to discontinue use.
- Assess that the pads or tape do not irritate the skin. If the skin is red you may need to use a different type of pad, contact gel or tape.
- Dispose of electrodes after woman has finished use of TENS

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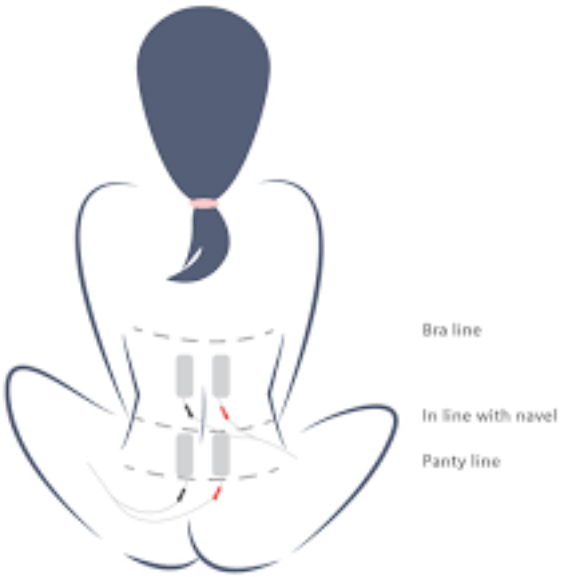
TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION (TENS) cont'd

DIAGRAM 1



6. DOCUMENTATION

- Medical Record

7. EDUCATIONAL NOTES

- There is mixed evidence for the use of TENS for pain management in labour.
- TENS machines are a non-pharmacological pain relief method that is controlled by the woman
- TENS has been shown to have no adverse effects on the mother or the fetus
- TENS is more effective when started as early in labour as possible
- TENS works by stimulating the larger nerve fibres and thus inhibiting the transmission of pain along the smaller nerve fibres to the spinal cord and resulting in release of endorphins mediating the perception of pain
- After the TENS has been used for a while, the woman will notice the stimulation feels weaker. Adjust the intensity of both channels until an intense but comfortable level is achieved and leave at this setting for the duration of the labour, unless further adjustment is required for comfort.
- Other pain relief techniques can be performed in conjunction with TENS except use of water or Epidural block
- Skin irritation may occur if TENS is used over long periods, in which case electrodes should be repositioned
- TENS may interfere with some fetal monitoring equipment e.g. fetal electrodes
- TENS electrodes should not to be placed over broken skin, or rash
- TENS unit is not waterproof therefore women should not use shower or bath whilst using TENS
- Do not remove electrodes whilst unit is in use

TRANSCUTANEOUS ELECTRICAL NERVE STIMULATION (TENS) cont'd

8. RELATED POLICIES / PROCEDURES / CLINICALGUIDELINES

- Epidural Policy and Management Guidelines
- Labour and Birth in water
- Morphine Sulphate (Subcutaneous injections) for antenatal and labour pain
- Fetal electrode

9. RISK RATING

Low

10. NATIONAL STANDARD

Standard 5 – Comprehensive Care

11. REFERENCES

(1) Vance, C.G., Dailey, D.L. et al (2014) Using TENS for pain control: the state of the evidence. Pain Management, 4(3), 197-209
(2) Santana, L.S., Silva Gallo, R.B., et al (2016). Transcutaneous electrical nerve stimulation (TENS) reduces pain and postpones the need for pharmacological analgesia during labour: a randomised trial. Journal of Physiotherapy 62(2016), 29-34
(3) Sluka, K.A., Bjordal, J.M. et al (2013) What makes transcutaneous electrical nerve stimulation work? Making sense of the mixed results in the clinical literature. Physical Therapy 93(10) 1397-1402
(4) Dowswell T, Bedwell C et al (2009). Transcutaneous electrical nerve stimulation for pain in labour relief. The Cochrane Library
(5) Body Clock Health Care Ltd (2017) Babycare TENS Elle TENS 2 Instructions for use
(6) Medical Ltd (2008) NeuroTrac Obstetric TENS operators manual

REVISION & APPROVAL HISTORY

Reviewed and endorsed Maternity Services LOPs 14/8/18
Approved Quality & Patient Safety Committee 15/4/10
Endorsed Obstetrics Guidelines Group March/April 2010

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