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CASE REPORT

Acupuncture in the management of post-partum headache following neuraxial analgesia

A. Sharma, E. Cheam

Department of Anaesthesia, Hillingdon Hospital, Uxbridge, Middlesex, UK

ABSTRACT

Women presenting with low pressure post-partum headache following neuraxial techniques are frequently offered an epidural blood patch, despite its inherent risks. We present two parturients with classical symptoms of low-pressure headache, who each received neuraxial labour analgesia without a documented dural puncture with a Tuohy needle. Both parturients were successfully managed using acupuncture rather than an epidural blood patch.

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Introduction

Headache is a common symptom in the post-partum period, reportedly occurring in up to 25% of all parturients.^{1,2} In women who receive epidural labour analgesia without a documented dural puncture, the incidence of headache can be as high as 36%.³

Post-partum headache can be potentially disabling, with maximal symptoms in the middle of the first post-partum week and gradual resolution. However, headaches occurring early post partum may become chronic in 3-5% of patients.³ It is therefore important to identify these women early and provide safe, effective management.

Low-pressure headache following neuraxial analgesia or anaesthesia can be distressing and is frequently attributed to inadvertent or unrecognised dural puncture. The current definitive treatment is an epidural blood patch, which can be labour-intensive and associated with adverse events.⁴ Moreover, women are frequently reluctant to receive another epidural needle insertion to manage a problem perceived to be the result of a previous insertion.

Acupuncture is recognised as useful in the treatment of headaches of multiple aetiology. The Cochrane re-

view,⁵ which described 26 studies with a total of 1151 patients, reported that there is evidence to support the value of acupuncture for the treatment of idiopathic headache. Acupuncture is comparatively safe, has few risks, and is minimally invasive in the hands of trained providers.

We report the use of acupuncture in the management of low-pressure headache in two parturients.

Case 1

A 35-year-old primigravida, with no significant past medical history or previous experience of acupuncture, received epidural labour analgesia. A 16-gauge Tuohy needle was sited with loss of resistance to normal saline. “Transient paraesthesia” was reported on epidural catheter insertion but the symptom did not persist. There was no documented inadvertent dural puncture. The patient had a ventouse-assisted delivery and the epidural catheter was removed uneventfully.

The following day, the patient developed a predominantly frontal headache with radiation to the occiput and neck, which was constant, but more severe in the morning with ambulation. The patient reported a pain numerical rating score (PNRS) of 3/10. There was no associated nausea or vomiting. Informed consent for acupuncture was obtained and one treatment session was administered at the bedside. The following acupuncture points were used (see Box):

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Correspondence to: A. Sharma, Department of Anaesthesia, Hillingdon Hospital, Pield Heath Road, Uxbridge, Middlesex, UB3 8NN, England, UK. Tel.: 00 (44) +7734150701.

E-mail address: anudoc@hotmail.com

Box

Acupuncture points (recommended needle size 0.25 × 30–33 mm)

Headaches

Gallbladder 14: 1 inch above the eyebrow in line with pupil looking straight ahead

Gallbladder 20: Below the occiput

Neck Pain

Gallbladder 21: halfway between C7 and acromium

Small Intestine 12: midpoint of superior scapula spine

Plus Trigger points: see text for locating trigger points

Relaxation

Colon 4: 1 cun* from the edge of the webbed space between thumb and index finger

*Length of the distal phalanx of the thumb

1. For headache: gallbladder 14, 20 and 21,
2. For neck pain: small intestine 12 plus trigger points,
3. For relaxation: colon 4.

Standard, sterile, single-use acupuncture needles were used ('AcuMedic': size 0.25 × 30–33 mm). Needles were inserted approximately 1–2 mm and 'manipulated' for a few seconds with a repetitive twisting motion using the provider's thumb and index fingers, according to standard acupuncture techniques. The acupuncture needles were then left in place for approximately 10 min. Immediately before removal, the individual acupuncture needles were again manipulated for a further few seconds as described above.

The parturient was encouraged to maintain adequate oral fluid intake and regular oral analgesia (codydramol 2 tablets every 6 h and diclofenac 50 mg every 8 h), according to our conservative pain management protocol. Her symptoms improved over the next 48 h and, at the end of day 2 her PNRS fell to 0/10, following acupuncture. She required no further treatment and was discharged home.

Case 2

A 30-year-old primigravida, with no prior experience of acupuncture, had suffered a headache following post-operative epidural analgesia nine years previously. On this occasion she had combined spinal-epidural analgesia for labour. A 16-gauge Tuohy needle was sited with loss of resistance to saline, followed by a 26-gauge pencil-point spinal needle. The patient had a normal vaginal delivery, her epidural catheter was removed and she was discharged home.

Two days later, she returned complaining of headache which was constant, but more severe in the upright

position and with ambulation. She also complained of nausea, vomiting, generalised back pain and "feeling unwell, weak and tired." Her PNRS was 7–9/10. The following day, she was offered acupuncture. She gave informed consent and received one session of acupuncture at her bedside. The technique employed was identical to that noted above, except for the location of her trigger points. Within 40 min of completion of her acupuncture treatment, she felt much better and her PNRS was reduced to 4/10.

We also prescribed oral analgesia as required (paracetamol 1 g or codydramol 2 tablets every 6 h) and encouraged adequate oral intake of fluids. She agreed to a second acupuncture treatment session the following day, and her symptoms and PNRS improved further to 3/10. She was subsequently discharged home and needed no further intervention.

Discussion

We report two women with post-partum headaches following neuraxial labour analgesia without a documented dural puncture by the Tuohy needle. Both presented with classical symptoms of low-pressure headache, which were exacerbated by standing and ambulating, and neck pain.

Symptoms of low-pressure post-partum headache are frequently dull or throbbing in nature and may be associated with dizziness, nausea and vomiting, neck and back pain, photophobia and auditory symptoms. Characteristically, symptoms are exacerbated in the upright position and during ambulation, with partial resolution in the supine position. Low-pressure headaches may be associated with loss of cerebrospinal fluid following dural puncture.^{6,7} Conservative approaches to the management of low-pressure headaches include regular oral analgesics, maintenance of adequate hydration, caffeine⁴ and anti-migraine therapies.⁵ Epidural blood patching can also be used with some success,⁸ but with occasional serious complications.⁹

Both of our parturients had classic symptoms of low-pressure headache without recognised dural puncture with the Tuohy needle, although our second patient had a dural puncture with a spinal needle. Although it is possible that both patients' symptoms would have resolved with conservative management, our unit's normal practice is to offer an early epidural blood patch if symptoms are moderate. However, because many parturients, including these two, are reluctant to have another epidural insertion, we opted for acupuncture.

In acupuncture, needles are inserted and manipulated in order, it is said, to restore regulation of vital energy (Qi) through channels (meridians) in the body.¹⁰ The Western approach to acupuncture is based on neurophysiological principles, in which the insertion of acupuncture needles releases endorphins that modify the

pain pathways.¹⁰ Acupuncture points are chosen based on the presenting symptoms and signs. Acupuncture has been successfully used for the management of headaches of multiple aetiologies (migraine, tension-type, cluster and non-specific chronic type).⁵ More specifically, six case studies have observed that acupuncture was effective for the treatment of post-dural puncture headaches in parturients.¹¹ The acupuncture techniques targeted muscle spasm (“neck stiffness and ... band-like tightening”¹¹) and tender points along the gallbladder meridian together with general relaxation and analgesic points. After one initial treatment, four of their six cases remained symptom-free and needed no further intervention. Overall, however, acupuncture trials are small in number, and trial design is inadequately reported, making results difficult to interpret.

Acupuncture is relatively safe and minimally invasive in the hands of trained providers. Simple acupuncture techniques are comparatively easy to learn and perform. Many patients are left feeling more relaxed after acupuncture. The risks and side effects of acupuncture are small and mostly inconsequential. Acupuncture may result in drowsiness or light-headedness after treatment (in extreme cases, a vaso-vagal episode especially in needle-phobic subjects), soreness, bruising or minimal bleeding around needled areas, localised inflammation or infection and a transient exacerbation of symptoms.¹⁰

In our experience, parturients presenting with low-pressure headache following neuraxial techniques are understandably reluctant to receive an epidural blood patch. In this setting on our unit, our initial conservative approach will be to use acupuncture together with simple analgesics. Acupuncture may be effective, is less invasive and less labour intensive and has fewer inherent risks than epidural blood patch. However, randomised controlled studies are needed to establish the role of acupuncture in the management of parturients presenting with headache, of any aetiology, in the puerperium.

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