

# Auricular acupuncture for post-operative tonsillectomy pain management

## Abstract

Battlefield acupuncture is a quickly taught auricular acupuncture technique, where semi-permanent acupuncture needles are placed on five specific points on the ear for acute pain relief. Pain management after tonsillectomy can be problematic. Postoperative pain restricts drinking and eating, and increases postoperative morbidity slowing recovery. Increasing evidence indicates that acupuncture has a role in post-operative tonsillectomy pain management. With auricular acupuncture, specific auricular acupuncture points are stimulated using a variety of methods that can include small needles, seeds and magnets. These devices can be left temporarily in place using adhesive tape. The patient or parent can then repeatedly apply pressure to the acupoints for several minutes a day for ongoing pain relief, which allows the patient to have continued acupuncture benefits in a home environment. Acupuncture has the advantages of low cost, few complications and minimal adverse side effects. Auricular acupuncture could potentially decrease analgesic consumption and its potential adverse effects, promoting early recovery. Auricular acupuncture could add a further option to post-tonsillectomy surgical pain management.

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Jim Bartley<sup>1,2</sup><sup>1</sup>Department of Otolaryngology Head and Neck Surgery  
Counties District Health Board, New Zealand<sup>2</sup>Department of Surgery University of Auckland, New Zealand

**Correspondence:** Jim Bartley Department of Otolaryngology  
Head and Neck Surgery Counties District Health Board 19  
Lambie Drive Auckland 2104, New Zealand, Tel +64-9-6310475,  
Email jbartley@ihug.co.nz

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## Introduction

Battlefield acupuncture is a quickly taught auricular acupuncture technique, where semi-permanent acupuncture needles are placed on five specific points on the ear for acute pain relief.<sup>1,2</sup> Tonsillectomy is associated with a high incidence of postoperative pain<sup>3</sup> that restricts drinking and eating, and increases postoperative morbidity slowing recovery.<sup>4</sup> After hospital discharge, post-operative pain is managed with a variety of pain-relieving medications<sup>5</sup>. In clinical practice, post-operative tonsillectomy pain may be poorly controlled.<sup>4,6</sup> Increasing evidence indicates that acupuncture has a role in post-operative tonsillectomy pain management.<sup>4,8</sup>

## Acupuncture

Acupuncture usually involves inserting fine needles into chosen points along specific energetic pathways or meridians of the body; a range of treatment therapies is available.<sup>9,10</sup> From a Western medicine perspective, acupuncture analgesia mechanisms are not clear. Acupuncture may depress pain by activating various neurotransmitters or modulators such as opioid peptides, norepinephrine, serotonin, and adenosine. Acupuncture may also activate endogenous pain inhibitory pathways.<sup>9</sup> Clinical studies have shown that acupuncture is a useful adjuvant treatment in post-operative pain,<sup>9</sup> including post-tonsillectomy pain.<sup>7,8</sup> However in a home situation, the large majority of patients would be reluctant to needle themselves or their families.

## Auricular acupuncture

With auricular acupuncture, specific auricular acupuncture points are stimulated using a variety of methods that can include small needles, seeds and magnets. These devices can be left temporarily in place using adhesive tape.<sup>10</sup> Somatic reflexology posits that diseases are projected onto the ear at regular and measureable zones.<sup>11,12</sup> While no anatomical pathways exist to directly connect inner organs with the ear, limited functional magnetic resonance imaging has corroborated these projections.<sup>12</sup> Battlefield acupuncture is an auricular acupuncture technique that can be learnt in a 4-hour workshop.<sup>2</sup> A recent review article has concluded that auricular acupuncture significantly

reduces postoperative pain.<sup>13</sup> No trial has reported the role of auricular acupuncture acupressure patches in post-tonsillectomy pain management, but auricular acupuncture has been used successfully in acute sore throat management.<sup>9</sup> Auricular Acupuncture does allow acupressure patches, as an alternative to needles, to be applied to specific auricular acupuncture points.<sup>2,11</sup> A variety of very small needles encased surgical grade, latex-free adhesive are also available.<sup>14</sup> The patient or parent can then repeatedly apply pressure to the acupoints for several minutes a day during the day for ongoing pain relief. This allows the patient to have continued acupuncture benefits in a home environment, extending the therapeutic period without direct provider oversight.

## Conclusion

Postoperative pain management after tonsillectomy can be difficult. Acupuncture has the advantage of low cost, few complications and minimal adverse effects. The application of the self-adhesive needles to auricular acupuncture points is painless and involves minimal time. Auricular acupuncture using semi-permanent adhesive needles could add a further option to post-tonsillectomy surgical pain management.

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## Conflicts of interest

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