Clinical Practice Guideline:  Intradermal Needles and Ear Tacks

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Product:  Specialty

GUIDELINE

American Specialty Health – Specialty (ASH) considers the use of intradermal needles (i.e., acupuncture devices that puncture and remain in the patient’s skin upon the patient leaving the office) such as needle implants or ear tacks not medically necessary due to risk of direct harm.

Due to the potential for direct harm from this procedure, including infection and injury, practitioners are encouraged to use the safer alternative of ear seeds, press balls, and other acupressure devices that do not puncture the skin for post-treatment acupuncture point stimulation. For more information, see the ASH Techniques and Procedures Not Widely Supported as Evidence Based (CPG 133 – S) clinical practice guideline.

Description/Background

Intradermal needles are typically short, sterile needles made of stainless steel that are inserted just under the skin. Two common types of intradermal needles are grain-like and thumbtack. The grain-like needle type is about a centimeter long and has a small head that is said to look like a grain of wheat. The thumbtack type needle is about 3mm long and has a broad head that looks like a top of a thumbtack. The grain type needle is usually applied to acupuncture points on the body while the thumbtack type needle is generally applied to acupuncture points on the ear. Some intradermal needles are inserted horizontally, underneath the skin. Once embedded, the handle or exposed part of the needle is covered with an adhesive (e.g., medical tape) to protect against infection and hold the needle in place. Typically, intradermal needles are only left in for a few days.

Intradermal needles provide continuous stimulation of acupuncture points by remaining in the skin. Intradermal needles are typically used to treat certain chronic and/or painful diseases where patients can benefit from longer retention times of the needles. Examples of conditions where use of embedded intradermal needles might be indicated include headache, stomachache, asthma, insomnia, and dysmenorrhea. Embedded intradermal needles may also be used to treat patients seeking assistance in tobacco cessation or weight loss.

Evidence and Research

In one controlled, double-blind study, Kotani et al., (2001) concluded that postoperative pain, analgesic requirements, and opioid-related side effects after both upper and lower...
abdominal surgery were reduced with preoperative insertion of intradermal needles at acupuncture points 2.5cm from the spinal vertebrae (along the urinary bladder meridian in acupuncture).

Another study by Kotani, Kushikata, Suzuki et al. (2001) tested the hypothesis that insertion of intradermal needles into painful abdominal scars reduces scar pain. Data suggest the insertion of intradermal needles into painful points is an effective treatment for intractable abdominal scar pain.

Acupuncture’s usefulness in obesity management has not yet been fully evaluated. The aim of Lacey et al.’s (2003) review paper was to survey and critically evaluate the descriptive and controlled trials of acupuncture for enhancing weight loss. The underlying principles of acupuncture point stimulation are described, with an emphasis on auricular (ear) acupuncture, the method most often chosen for obesity studies. The difficulties of selecting suitable placebo controls are highlighted. To date, most trials have been descriptive in nature, of short duration (< or = 12 weeks), and designed using nonstandard treatment protocols. Sacks (1975) performed a retrospective review of patients treated for drug addiction, obesity, alcoholism, and excessive smoking. The studies used ear tacks and body points for various lengths of time in 1,030 cases of obesity. Success rates were noted as 25% excellent success (weight loss of 8–10 lb/month), 50% good success (control of eating habits and half of their individual goal being met), while 20% were ‘not influenced at all’.

Further careful study of acupuncture’s potential usefulness as an adjunct in weight management is recommended.

Since acupuncture provides analgesia it might be expected to reduce the need for conventional anesthetic drugs during general anesthesia. Akca and Sessler (2002) discuss four (4) double blind, placebo-controlled studies evaluating acupuncture’s ability to reduce analgesic or anesthetic requirement. Three studies (from Greif et al., 2002, Morioka et al., 2002, and Taguchi et al., 2002) examined whether transcutaneous electrical stimulation of some acupuncture points reduces anesthetic requirement. Kotani et al., (2001) tested the hypothesis that preoperative insertion of intradermal needles in the bladder meridian reduces postoperative pain and opioid requirement. None of the first three studies showed that the stimulation of the acupuncture points produces clinically important reductions in anesthetic requirement. In contrast, Kotani et al., (2001) showed that at least some acupuncture techniques provide substantial postoperative analgesia and significantly reduce opioid requirements. Usichenkco (2005) showed that auricular acupuncture with press needles retained in the ear for three days helped reduce the analgesic needs of patients after total hip arthroplasty. Deng et al. (2008) sought to determine whether intradermal acupuncture reduced pain or analgesic use in patients with cancer after thoracotomy compared with a sham acupuncture technique (control). Results demonstrated no
statistically significant differences between groups for chronic pain assessments at 60 and 90 days, in-patient pain, and medication use in the hospital and after discharge.

One RCT (n = 90) evaluating the effectiveness of auricular acupuncture for reducing cancer pain found a positive effect for acupuncture using steel ear implants at acupuncture points where an electrodermal signal was detected (Alimi et al., 2003). In addition a pilot RCT (n = 43) evaluating the effectiveness of gold beads implanted at 5 acupuncture points in patients with osteoarthritis (OA) of the knee found preliminary evidence of effectiveness for self-assessed pain, stiffness, and function; and for surgeon-assessed knee score and knee function (Nejrup et al., 2008). Lan et al. (2015) completed a systematic review and meta-analysis on auricular acupuncture with seed or pellet attachments for primary insomnia. A total of 15 studies were identified as eligible for review. Statistical analyses revealed a positive effect of auricular acupuncture for primary insomnia, however considering the poor methodology and other design weaknesses, the evidence is not adequate to strongly support this treatment of insomnia.

Adverse effects from the use of intradermal needles have also been observed. Yamashita et al. (2001) reviewed Japanese literature and noted 124 cases of adverse events with acupuncture; Forty-eight cases were caused by needle breakage including 26 cases of intentionally embedded needles.

References


