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[Intervention Review]

Acupuncture for acute hordeolum

Ke Cheng¹, Andrew Law², Menghu Guo¹, L Susan Wieland³, Xueyong Shen⁴, Lixing Lao⁵

¹School of Acupuncture-Moxibustion and Tuina, Shanghai University of Traditional Chinese Medicine, Shanghai, China. ²Department of Epidemiology, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA. ³Center for Integrative Medicine, University of Maryland School of Medicine, Baltimore, Maryland, USA. ⁴School of Acupuncture-Moxibustion and Tuina, Shanghai University of Traditional Chinese Medicine, Shanghai Research Center of Acupuncture & Meridians, Shanghai Key Laboratory of acupuncture mechanism and acupoint function, Shanghai, China. ⁵School of Chinese Medicine, The University of Hong Kong, Hong Kong, China

Contact: Xueyong Shen, snowysh@hotmail.com.

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ABSTRACT

Background

Hordeolum is an acute, purulent inflammation of the eyelid margin usually caused by obstructed orifices of the sebaceous glands of the eyelid. The condition, which affects sebaceous glands internally or externally, is common. When the meibomian gland in the tarsal plate is affected, internal hordeolum occurs, while when the glands of Zeis or Moll associated with eyelash follicles are affected, external hordeolum, or stye occurs. The onset of hordeolum is usually self limited, and may resolve in about a week with spontaneous drainage of the abscess. When the condition is severe, it can spread to adjacent glands and tissues. Recurrences are very common. As long as an internal hordeolum remains unresolved, it can develop into a chalazion or generalized eyelid cellulitis. Acupuncture is a traditional Chinese medical therapy aimed to treat disease by using fine needles to stimulate specific points on the body. However, it is unclear if acupuncture is an effective and safe treatment for acute hordeolum.

Objectives

The objective of this review was to investigate the effectiveness and safety of acupuncture to treat acute hordeolum compared with no treatment, sham acupuncture, or other active treatment. We also compared the effectiveness and safety of acupuncture plus another treatment with that treatment alone.

Search methods

We searched CENTRAL, Ovid MEDLINE, Ovid MEDLINE In-Process and Other Non-Indexed Citations, Ovid MEDLINE Daily, Ovid OLDMEDLINE, Embase, PubMed, Latin American and Caribbean Health Sciences Literature Database (LILACS), three major Chinese databases, as well as clinical trial registers all through 7 June 2016. We reviewed the reference lists from potentially eligible studies to identify additional randomised clinical trials (RCTs).

Selection criteria

We included RCTs of people diagnosed with acute internal or external hordeola. We included RCTs comparing acupuncture with sham acupuncture or no treatment, other active treatments, or comparing acupuncture plus another treatment versus another treatment alone.

Data collection and analysis

We used standard methodological procedures used by Cochrane.



Main results

We included 6 RCTs with a total of 531 participants from China. The mean age of the participants ranged from 18 to 28 years. Four RCTs included participants diagnosed with initial acute hordeolum with a duration of less than seven days; one RCT included participants diagnosed with initial acute hordeolum without specifying the duration; and one RCT included participants with recurrent acute hordeolum with a mean duration of 24 days. About 55% (291/531) of participants were women. Three RCTs included participants with either external or internal hordeolum; one RCT included participants with only external hordeolum; and two RCTs did not specify the type of hordeolum. Follow-up was no more than seven days after treatment in all included RCTs; no data were available for long-term outcomes. Overall, the certainty of the evidence for all outcomes was low to very low, and we judged all RCTs to be at high or unclear risk of bias.

Three RCTs compared acupuncture with conventional treatments. We did not pool the data from these RCTs because the conventional treatments were not similar among trials. Two trials showed that resolution of acute hordeolum was more likely in the acupuncture group when compared with topical antibiotics (1 RCT; 32 participants; risk ratio (RR) 3.60; 95% confidence interval (CI) 1.34 to 9.70; low-certainty of evidence) or oral antibiotics plus warm compresses (1 RCT; 120 participants; RR 1.45; 95% CI 1.18 to 1.78; low-certainty of evidence). In the third trial, little or no difference in resolution of hordeolum was observed when acupuncture was compared with topical antibiotics plus warm compresses (1 RCT; 109 participants; RR 1.00; 95% CI 0.96 to 1.04; low-certainty of evidence). One RCT mentioned adverse outcomes, stating that there was no adverse event associated with acupuncture.

Three RCTs compared acupuncture plus conventional treatments (two RCTs used topical antibiotics and warm compresses, one RCT used topical antibiotics only) versus the conventional treatments alone. One of the three RCTs, with very low-certainty evidence, did not report the resolution of acute hordeolum; however, it reported that acute hordeolum relief might be higher when acupuncture was combined with conventional treatments than with conventional treatments alone group (60 participants; RR 1.80; 95% CI 1.00 to 3.23). Pooled analysis of the remaining two RCTs, with low-certainty evidence, estimated resolution of acute hordeolum was slightly higher in the combined treatment group compared with the conventional treatment alone group at 7-day follow-up (210 participants; RR 1.12; 95% CI 1.03 to 1.23; $I^2 = 0\%$). None of the three RCTs reported adverse outcomes. Among the included RCTs, four participants, two from the acupuncture plus conventional treatments group and two from the conventional treatments alone group, withdrew due to exacerbation of symptoms.

Authors' conclusions

Low-certainty evidence suggests that acupuncture with or without conventional treatments may provide short-term benefits for treating acute hordeolum when compared with conventional treatments alone. The certainty of the evidence was low to very low mainly due to small sample sizes, inadequate allocation concealment, lack of masking of the outcome assessors, inadequate or unclear randomization method, and a high or unreported number of dropouts. All RCTs were conducted in China, which may limit their generalizability to non-Chinese populations.

Because no RCTs included a valid sham acupuncture control, we cannot rule out a potential expectation/placebo effect associated with acupuncture. As resolution is based on clinical observation, the outcome could be influenced by the observer's knowledge of the assigned treatment. Adverse effects of acupuncture were reported sparsely in the included RCTs, and, when reported, were rare. RCTs with better methodology, longer follow-up, and which are conducted among other populations are warranted to provide more general evidence regarding the benefit of acupuncture to treat acute hordeolum.

PLAIN LANGUAGE SUMMARY

Acupuncture for acute hordeolum (stye)

What is the aim of this review?

The aim of this Cochrane review was to compare the benefits and harms of acupuncture versus conventional treatments used for treating acute hordeolum (stye).

Key messages

Acupuncture, either alone or alongside conventional treatments, may increase the chance of hordeolum getting better (low-certainty evidence). There is a lack of information on adverse effects. Studies that have a longer follow-up and a more diverse study population are needed to tell if acupuncture really is a beneficial treatment.

What was studied in this review?

Hordeolum the medical name for a stye. It is a small painful lump, or abscess, on the inside or outside of the eyelid. Typically, hordeolum goes away on its own within a week or so. However, serious cases of hordeolum can infect nearby tissues and glands. This infection can result in serious eyelid conditions.

Common treatments for hordeolum include warm compresses applied at home, available over-the-counter topical medications and lid scrubs, antibiotics or steroids, lid massages, and other treatments. In East Asian countries, acupuncture is used to treat hordeolum, either alone or alongside these conventional treatments. According to the philosophy of traditional Chinese acupuncture, energy circulates in 'meridians' (or channels) through the body. When the meridian energy circulation is blocked by pathogenic factors, pain or ill health occurs. The way to restore health is to use fine needles to stimulate the appropriate acupuncture points in the body. The purpose of this review

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was to compare acupuncture with no treatment, sham acupuncture, or conventional treatment to determine which treatment works best for acute hordeolum.

What are the main results of the review?

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We found six studies from China, including a total of 531 people. The follow-up was no more than seven days after treatment. Three studies compared acupuncture with different conventional treatments and three studies compared acupuncture plus conventional treatments versus conventional treatments alone.

The review showed that:

• Acupuncture may increase the chance of the hordeolum getting better compared with using antibiotics and/or warm compresses (low-certainty evidence).

• Acupuncture combined with antibiotics and/or warm compresses compared with antibiotics and/or warm compresses may slightly increase the chance of the hordeolum getting better (low-certainty evidence).

• It is uncertain whether there are any harmful effects of acupuncture for hordeolum.

How up-to-date is this review?

Cochrane researchers searched for studies that had been published up to 7 June 2016.