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Review Article

Ear candles: a triumph of ignorance over science

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Abstract

Ear candles are hollow tubes coated in wax which are inserted into patients' ears and then lit at the far end. The procedure is used as a complementary therapy for a wide range of conditions. A critical assessment of the evidence shows that its mode of action is implausible and demonstrably wrong. There are no data to suggest that it is effective for any condition. Furthermore, ear candles have been associated with ear injuries. The inescapable conclusion is that ear candles do more harm than good. Their use should be discouraged.

Key words: Cerumen; Therapy

Introduction

Complementary/alternative medicine (CAM) is becoming more and more popular. Longitudinal survey data, for instance, show that between 1990 and 1997 the one-year prevalence of CAM use in the US general population increased from 33 to 42 per cent.¹ Otolaryngologists will therefore encounter many patients who have tried one type of CAM or another.

Although some forms of CAM have been submitted to clinical trials and demonstrated promise,² most have not been adequately tested for efficacy or safety. Others have been shown to be not clinically useful.² This article is aimed at summarizing the evidence for or against 'ear candles', a type of CAM used by many patients of otolaryngologists.

What is it?

Ear candling is also known as 'ear coning' or 'thermoauricular therapy'. According to proponents, this treatment has its roots in the traditional healing practices of China, Greece, Egypt, Tibet and North America; even Atlantis is cited as its place of origin.³

Ear candles are hollow tubes of fabric soaked in warm beeswax and subsequently hardened through cooling. Candling entails sticking such a candle into the ear of the patient (who usually lies on one side) and lighting the far end of the candle, which then burns slowly over about 15 min. Thereafter, the candle is extinguished and the content of the near end of the candle is usually displayed for inspection. This content, many therapists inform their patients,

is cerumen from the patient's ear. Therapists state that the cerumen is drawn out of the ear through the 'chimney effect' or capillary forces produced by the burning candle.^{3,4}

What is it for?

The 'obvious' indication for ear candling is the removal of cerumen, yet the claims of therapists go far beyond this and include hayfever, headaches, sinusitis, rhinitis, colds/influenza and tinnitus.³ Even 'sharpening of mental functioning, vision, hearing, smell, taste and colour sensation' is a claimed benefit.⁴

Prevalence of use

No reliable prevalence data of ear candling exist. Seely *et al.*⁵ mention that one wholesale ear candle distributor in Seattle sold around 1000 candles per week in 1996. The Internet provides thousands of references to the search terms 'ear candling' or 'thermoauricular therapy' or 'ear coning'.³ Thus it seems fair to assume that the prevalence of use is high. Of 122 US otolaryngologists, 40 were aware of ear candle use in at least one of their patients.⁵ Apparently, some UK nurses in charge of inmates use the treatment on prisoners.³

Does it work?

There is no shortage of anecdotes published to promote the use of ear candles,⁶ yet adequate research on the topic is rare. The following is a summary of the results published in the peer-

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reviewed literature. It is based on systematic searches of Medline, Embase, the Cochrane Library and Amed for any type of investigation into ear candles.

- **This paper is a review, from a department of Complementary Medicine, of the use of ear candles in removing impacted cerumen**
- **The author concludes that such methods of wax removal are potentially harmful and should probably be banned**

A series of (poorly documented) experiments concluded that ear candles do not eliminate any substance from the ear. The material deposited in the candle does not originate from the human body, but from the candle itself.⁴

Seely *et al.* showed this in rigorously conducted in vitro experiments.⁵ These authors convincingly documented 1) that the burning of the candle does not produce any negative pressure at all, and 2) that the deposit is, in fact, candle wax. In a series of clinical experiments, Seely and colleagues also demonstrated that ear candles did not extract cerumen from human ears. Moreover, ear candles produced a deposit even when used in volunteers who, prior to the experiment, had no cerumen.⁵

Is it safe?

Seely *et al.* surveyed all members of the UK Northwest Academy of Otolaryngology – Head and Neck Surgery,⁵ 122 otolaryngologists responded (response rate 75 per cent). Overall, 14 physicians had treated patients with complications associated with ear candling. In total, 21 ear injuries (13 burns, seven occlusions of the ear canal and one tympanic membrane perforation) were noted. External otitis and temporary hearing loss were secondary complications in three and six patients, respectively.⁵

Comment

Ear candling seems to be popular and is heavily promoted (for example, via the Internet), with

claims that could easily seem scientific to lay people. However, the truth is that its mechanism of action is first, implausible, and second, demonstrably wrong.⁵ Moreover, it has no positive clinical effects and seems to be associated with considerable risks.⁵ The few scientific articles available on this subject do not suggest that ear candles are an effective treatment for any condition.

Ear candling is thus one of those CAM modalities that clearly does more harm than good. In my view, therefore, it should be banned. Others might disagree and argue that, in a liberal society, people have the right to obtain any treatment they want. I would argue that this amounts to a triumph of ignorance over science – or perhaps a triumph of commercial interests over medical reasoning. The price of one ear candle amounts to US\$ 2.50;⁴ based on recommendations of use,⁶ this would amount to US\$ 15.00 per week, or US\$ 780.00 per year.

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