

## Ear candling

### Should general practitioners recommend it?

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**E**ar wax accumulation is one of the most common otologic conditions seen in primary care; removing ear wax is the most common ears, nose, and throat procedure carried out in the community. With the increasing use of and interest in complementary medicine in the United Kingdom<sup>1</sup> and elsewhere, it is not surprising that ear candling has developed such a following.

Ear candling involves placing a hollow candle (made from a fabric tube soaked in beeswax) in the external auditory canal. The candle is then lit and burned for about 15 minutes.<sup>2</sup> After the procedure is finished, a brown waxy substance, believed by ear candling practitioners to be a mixture of ear wax, debris, and bacteria, is left in the candle stub.<sup>3</sup>

Ear candling can be performed by beauticians, alternative therapists, or by patients using kits at home. It is used mainly to remove ear wax, though it has also been used to try to relieve sinus pain, cure ear infections, help relieve tinnitus and vertigo, and even strengthen the brain!<sup>4</sup> Patients considering such alternative therapies might want to get advice from their GPs first.

We present a case of ear candling with a complication and discuss the current literature.

### Case description

A 50-year-old woman presented to her GP following an episode of ear candling. After 15 minutes, the person performing the candling burned herself while attempting to remove the candle and spilled candle wax into the patient's right ear canal. On examination, a piece of candle wax was found in the patient's ear, and she was referred to the local ear, nose, and throat department. Under general anesthetic, a large mass of solidified yellow candle wax was removed from the deep meatus of the ear (**Figure 1**). The patient had a small perforation in her right tympanic membrane. Results of a pure tone audiogram showed a mild conductive hearing loss on the right side. At a follow-up appointment 1 month later, the perforation was still there, and the patient's hearing had not improved.

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Cet article a fait l'objet d'une revision par des pairs

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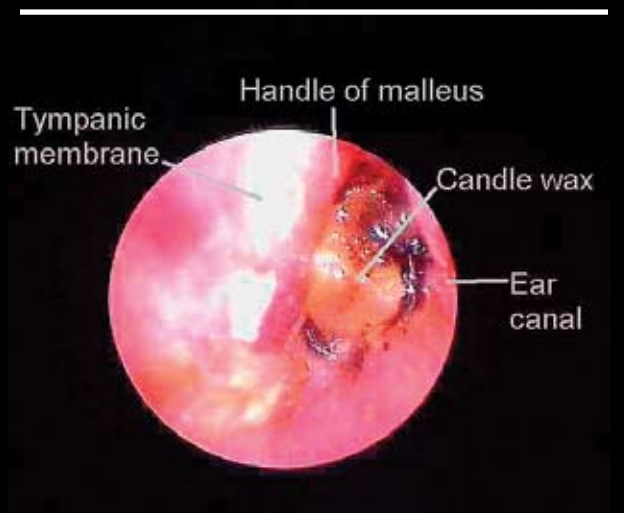
### Discussion

Research shows that 71% of people would like to discuss complementary medicine with their GPs.<sup>1</sup> It is important for GPs to know whether any given alternative therapy will be beneficial. In one study,<sup>1</sup> 85% of GPs surveyed thought they did not have enough information and knowledge about the effectiveness and safety of different complementary therapies.

We did a literature search from 1976 to 2006 of the Cochrane Database of Systematic Reviews, the Cochrane Controlled Trials Register, and MEDLINE (using PubMed) for *ear candling*, *ear candles*, and using MeSH terms *ear and complementary therapy* and *ear and alternative medicine*. We also did a general Internet search. Our search revealed few references in the scientific literature and no other case reports in peer-reviewed journals. We were unable to find any reliable information about how many people use ear candling. One supplier we contacted in the United Kingdom sold 100 to 200 ear candles every month, and there are many suppliers advertising on the Internet.

Proponents of ear candling offer 2 main theories about how it works. One hypothesis is that of the "chimney effect": the burning candle creates a vacuum that draws wax out of the ear along with debris and bacteria.<sup>5</sup> The other theory claims that at the time of the candling no ear wax is drawn out, but that the wax heats up, melts, and comes out of the ear over the following few days.

**Figure 1.** Candle wax in patient's ear following ear candling



A study<sup>6</sup> tested the first theory by creating an artificial ear canal and measuring the pressure within the ear canal using a tympanometer during candling. This experiment showed that no negative pressure was created during candling. It also found that a powder was deposited on the artificial tympanic membrane as ear candling was carried out. When the powder was analyzed using gas chromatography and mass spectrometry it was found to constitute multiple alkanes that are found in candle wax but not in ear wax.<sup>6</sup>

An experiment<sup>7</sup> conducted for Health Canada to examine the second theory measured the air temperature 10 mm from the base of the candle while it was burning. The highest temperature reached was 22° C, well below core body temperature.

A small clinical trial<sup>6</sup> proved the implication of these experiments. Ear candling was carried out on ears, half with wax in them, half without. Otoendoscopic photographs were taken before and after ear candling. These photographs showed that no ear wax was removed from the ears with impacted wax, and candle wax was deposited in the ears without wax.


Adverse effects have been reported with ear candling. In the United States, members of the Northwest Academy of Otolaryngology-Head and Neck Surgery were surveyed about their patients' use of ear candling and whether they had seen any complications of its use. Of 122 respondents, 40 were aware of its use by their patients, and 21 had treated ear injuries associated with ear candling (Table 1<sup>6</sup>).<sup>6</sup> Ear candling should be absolutely contraindicated in patients with perforated tympanic membranes, grommets, or who have had recent surgery.<sup>8</sup>

**Table 1. Ear injuries associated with ear candling: There were 122 respondents to the survey.**

INJURY	NO. REPORTED
Burns	13
Occlusion of the ear canal	7
Temporary hearing loss	6
Otitis externa	3
Tympanic membrane perforation	1

Data from Seely et al.<sup>6</sup>

## Conclusion

Ear candling appears to be popular and is heavily advertised with claims that could seem scientific to lay people. However, its claimed mechanism of action has not been verified, no positive clinical effect has been reliably recorded, and it is associated with considerable risk. No evidence suggests that ear candling is an effective treatment for any condition. On this basis, we believe it can do more harm than good and we recommend that GPs discourage its use. 

## EDITOR'S KEY POINTS

- Ear wax accumulation is one of the most common otologic conditions seen in primary care; removing ear wax is the most common ears, nose, and throat procedure carried out in the community.
- Ear candling involves placing a hollow candle in the external auditory canal; a brown waxy substance, believed to be a mixture of ear wax, debris, and bacteria, is left in the candle stub.
- No evidence is available to suggest that ear candles are an effective treatment for any condition.

## POINTS DE REPÈRE DU RÉDACTEUR

- L'accumulation de cérumen est l'un des problèmes otologiques les plus communément observés en soins de première ligne; l'enlèvement du cérumen compte parmi les interventions les plus fréquentes, associées aux oreilles, au nez et à la gorge, qui sont effectuées en milieu communautaire.
- Le cône d'oreille consiste à introduire une chandelle auriculaire, en forme de cône creux, dans le conduit auditif; une substance brune et cireuse, que l'on croit être un mélange de cérumen, de débris et de bactéries, reste dans le creux de la chandelle.
- Il n'existe pas de données scientifiques faisant valoir que les chandelles auriculaires sont un traitement efficace pour quelque problème que ce soit.

**Dr Rafferty** was training in the Foundation Programme at Ninewells Hospital in Dundee, Scotland, at the time of writing the article. She is currently doing health and development work in Malawi, Africa. **Mr Davis** was a consultant and **Mr Tsikoudas** is an otolaryngologist at Ninewells Hospital.

## Competing interests

None declared

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