Complementary and alternative medicine on the treatment of otitis media

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ABSTRACT

Introduction: Otitis media is defined as inflammation of the middle ear which extends from the tympanic membrane up until the lateral wall of the inner ear. It was recognized as one of the major contributors to hearing loss, particularly among children under the age of five and individuals living in developing countries. Complementary and alternative medicine (CAM) becoming more popular in the community. Hence, this review aimed to study the benefits and adverse effects of CAM treatment, focusing on homeopathy, acupuncture, herbal medicine, supplement vitamin D, and probiotics. **Materials and Methods:** A scoping review was conducted from English scientific databases, including PubMed, Google Scholar, and Science Direct. Out of 32 papers found, only 16 papers that met the inclusion and exclusion criteria were included. This consists of all populations diagnosed with otitis media that were treated with complementary and alternative medicine published within 15 years. Other ear-related diseases and studies that did not involve CAM therapy were excluded. **Results:** A systemic review on 9 studies for homeopathy revealed symptom improvement, which led to a reduction in incidents of middle ear effusion together with a reduction in antibiotic use. It is also generally safe even for immunocompromised patients, apart from allergic reactions to the ingredients of the herbs used. There were no herb-drug or drug-drug interactions. Acupuncture showed significant enhancement in treatment when combined with antibiotics. However, there was no study for the outcome of acupuncture alone. Seven randomized clinical trials of herbal medicine showed good outcomes when combined with antibiotics. It shortened the initial recovery time and reduced complications such as effusion. Mild side effects such as headache, nausea, and vomiting have been reported. Probiotic supplements specifically with the variant S. salivarius are widely discussed recently but show no significant effect. A systematic review on the effects of vitamin D supplements highlighted its benefits on reducing ear discharge and rate of recurrence with no specific adverse effects. **Conclusion:** CAM in the treatment of otitis media offers potential in enhancing treatment outcomes. It showed promising results when combined with pharmacology and also can reduce the use of antibiotics in certain cases. However, further high-quality, large-scale studies are essential to establish the clinical efficacy, optimal dosing, safety profiles, and long-term benefits of these interventions.

Keywords: Otitis media, complementary therapies, herbal medicine, adverse effects