



Clinical Pharmacology & Toxicology Pearl of the Week

~ Homeopathic Medicine ~

Case

A mother presents to the emergency department with her 2-year-old daughter. The daughter has been unwell with cough and cold symptoms for four days, and a fever for the last 48 hours. While the fever has been successfully treated with acetaminophen, the mother is most concerned about nasal congestion that is preventing her daughter from sleeping at night. She hands you a box and asks if this medication that she bought at the grocery store pharmacy is 'ok' for her to give.



What is Homeopathy?



Homeopathy, or homeopathic medicine, is a medical system or practice that originated in Europe ~250 years ago.

Homeo = similar

Pathos = disease

Many of the medical practices of the 1700s lacked scientific derivation and were steeped in superstition. Common treatments, including purgatives, bleeding, blistering plasters, and emetics, are recognized today as clearly harmful. Dr Samuel Hahnemann, a German physician, was highly critical of the practices of his time and sought to develop safer alternatives. After repeatedly ingesting cinchona bark, a popular malaria treatment, and noting that he developed symptoms like malaria, Dr Hahnemann theorized that small amounts of a substance that causes symptoms may cure a disease with similar symptoms. In 1810, he published the "Organon of Rational Therapeutics", and expounded on the guiding principles of homeopathy. The current edition is still frequently referenced by homeopathic practitioners.

Foundational Principles

The "Law of Similars" or "Like-Cures-Like", states that a disease can be cured by a substance that produces similar symptoms in a healthy person. Homeopathic practitioners attempt to stimulate a body to heal itself, by giving very small doses of highly diluted substances, that in larger doses would produce illness or worsened symptoms.

The "Law of Minimum Dose", states that the lower the dose of a medication, the greater its effectiveness. Homeopathic medications are prepared by diluting substances in a stepwise fashion, shaking vigorously between each dilution. This process is called "potentization" and is believed to

transmit information or energy from the original substance to the final diluted product. In fact, most homeopathic products are so dilute that no molecules of the substance remain, and the formulation is effectively water +/- alcohol diluent. The theory that a substance can imprint or leave an essence that stimulates the body to heal itself is called the “memory of water”.

Controversy

There is a general lack of scientific evidence for homeopathy and many conventional physicians find homeopathic principles implausible. Despite this, homeopathy and other complementary and alternative medicines continue to gain prominence, particularly amongst young and affluent North Americans. In 2016, the Fraser Institute, reported that 79% of Canadians had used at least one complementary or alternative therapy sometime in their lives. This was an increase from 74% in 2006, and 73% in 1997. British Columbians were most likely to report lifetime use (89%), followed by Albertans (84%); Quebecers were least likely to have done so (69%). The most rapidly expanding therapies were massage, yoga, acupuncture, chiropractic care, osteopathy, and naturopathy. Homeopathic and naturopathic practitioners are sought out for their individualistic and patient centered approach, often spending considerable time with patients to address not only physical but emotional and mental health concerns.



Health Canada Licensing and Approval

In Canada, the Natural Health Products Regulations require all homeopathic medications that are being sold to have a license. Once issued, the product is provided a number that must appear on the product label. For homeopathic medications, this number is preceded by DIN-HM. The Natural and Non-

prescription Health Products Directorate reviews applications from manufacturers for safety, efficacy, and quality. The evidence required varies depending on level of risk for the health claim; ‘high risk’ claims require modern scientific evidence, but ‘low risk’ claims (those for self-resolving or self-limited conditions, with negligible potential for harm to health if the product efficacy is underperforming) may only require reference to an accepted homeopathic pharmacopoeia. Therefore, selecting a product with a DIN-HM may provide some reassurance that the product adheres to good manufacturer practices for quality, but likely fails to confer the same level of scrutiny for safety and efficacy that we have come to expect for prescription medications.

Where should homeopathic medications be sold, if at all?

There are generally two schools of thought on product availability and placement.

Opinion 1.... Non-evidence-based therapies have no role in modern medicine and therefore practitioners trained in scientific theory should not recommend or supply these products.

Homeopathic products do not belong in pharmacies and to sell them beside evidence-based products may imply health professional endorsement and steer patients away from other more efficacious therapies. The result may be patient harm.

Opinion 2.... While homeopathic products lack evidence of benefit, they also lack any significant evidence of toxicity or harm; this makes sense, given the infinitesimally small amounts of ingredient contained in the dilution. For this reason, there is no compelling public health or harm reduction argument to limit the availability of homeopathic products to the public. It is better to have products available in an environment, like a pharmacy, where patients can be provided with choice and receive advice from a regulated health professional, rather than from someone without expertise in scientific theory.

Case Resolution

You identify the product as a common homeopathic remedy and explain the theory of homeopathy and how products are manufactured by serial dilutions of symptom causing substances. You explain that homeopathy is a practice and belief system that has been practiced for many years but was not developed using the scientific principles that were taught during your medical training. As such, you cannot recommend the product for her child's symptoms, as you do not believe that it will be effective. Because it is essentially 'water', if she chooses to use it however, it is unlikely to cause harm and is not expected to interact with other medications she may give for fever, such as acetaminophen or ibuprofen. You discuss other non-drug treatment options including saline nose drops and room humidifiers.

References:

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Registrar's message: Homeopathic products in pharmacies. bcpharmacists.org

Stanbrook MB. Natural health products should be sold separately from drugs. CMAJ 2017;189: E848.



The Calgary Clinical Pharmacology physician consultation service is available Mon-Fri, 9am-5pm. The on-call physician is listed in ROCA. Clinical Pharmacology consultations are also available through Netcare e-referral process and through Calgary Zone Specialist Link. Click [HERE](#) for more details.



The Poison and Drug Information Service (PADIS) is available 24/7 for questions related to poisonings. Please call 1-800-332-1414 (AB and NWT) or 1-866-1212 (SK).