CLINICAL

Observations on the effects of odours on the homeopathic response



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Samuel Hahnemann described incidences where the homeopathic response was disrupted by noxious smells in the environment.

An earlier paper proposed that homeopathic medicines may be sensed by vomeronasal cells (VNCs) i.e. microvillus or brush cells in the vomeronasal organ (VNO), the taste buds and associated with the trigeminal nerve and nervus terminalis. This paper proposes an extension to the theory and suggests that a subset of solitary chemosensory cells (SCCs) in the diffuse chemosensory system (DCS) that is morphologically similar to VNCs might also be receptive to homeopathic medicines. The types of odours that may interfere with this process are described. Two clinical cases of disruption of the homeopathic response are given as examples, showing that successful re-establishment of remedy action can be produced by timely repetition of the medicine.

The ramifications on clinical homeopathic practice are discussed. *Homeopathy* (2014) **103**, 198–202.

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Many homeopathic practitioners have had cases where a well-chosen homeopathic medicine, having worked very well for a patient over months or years, suddenly has little or no effect when administered. In other cases the medicine has been producing a good therapeutic effect but suddenly all the symptoms come back again, for no apparent reason, earlier than expected. What could be the cause of these phenomena?

The Vomeronasal system (VNS) and homeopathy

I have proposed that homeopathic medicines are sensed primarily through the VNS.¹ The VNS is part of the apparatus of olfaction in humans (Table 1).

I now believe that there is another, peripheral, part of this receptor system that senses homeopathic medicines, the microvillus or brush cells, constituting a subset of solitary chemosensory cells (SCCs) in the diffuse chemosensory system (DCS).

This expanded view proposes that the VNS consists of;

- 1. The vomeronasal organ (VNO) in the nasal septum. This is also called Jacobson's organ.
- 2. Vomeronasal cells (VNCs) in the olfactory mucosa, the taste buds, the trigeminal nerve and in the terminal nerve (cranial nerve N).
- 3. A subset of SCCs of microvillus or brush type, morphologically similar to VNCs, within the DCS.

The DCS is made up of taste cells in the mouth, throat and respiratory system and upper gastrointestinal tract. However there are also taste-related SCCs found more caudally in the gastrointestinal tract and in other organs of endodermal origin. These are polymorphic and express different transduction systems depending on their site in the body. Some have secretory or absorption functions. These cells constitute a diffuse chemosensory apparatus in humans that may well be the earliest, and most primitive, sensory system as it has been shown to be present in many invertebrates.²

The brush or microvillus cells share the transient receptor potential channel M5 (TRPM5) transduction system with taste cells. Some cells using this transduction

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Table 1 An overview of the various anatomical structures involved in the sense of olfaction

The olfactory mucosa.

This contains non-myelinated neurones that are sensitive to odorous molecules. These run through the cribriform plate to synapse on second order neurones that run to the main olfactory bulb (cranial nerve 1). In the main olfactory mucosa there are also brush cells that are similar to vomeronasal cells (VNCs) and sense some pheromones.

The vomeronasal mucosa (Jacobson's organ).

This mucosa is in the nasal septum and senses non-odorant molecules or pheromones in low concentration. The typical VNC is a brush or microvillus cell with a long projection extending down to lie close to the unmyelinated nerve fibres that run through the lamina propria. The VNC does not synapse on these neurones but may transmit signals to them by communication through the intercellular space (ephaptic communication). The unmyelinated fibres then run through the cribriform plate with olfactory fibres but terminate on the accessory olfactory bulbs.

The terminal nerve (cranial nerve N).

The terminal nerve (also referred to as cranial nerve 0 or N) is a string of neurones lying close to the unmyelinated cells of both the vomeronasal mucosa and the main olfactory mucosa as they run through the cribriform plate. Terminal nerve neurones contain gonadotrophin releasing hormone (GnRH) that, when released, causes changes to the sensitivity of the pheromone-sensing brush cells in the vomeronasal organ and the main olfactory mucosa at reproductively appropriate times for the organism.*

The trigeminal nerve.

There are brush-type cells, in close association with the trigeminal nerve in the ocular, nasal and oral mucosae. These appear to be sensitive to bitter or irritant chemicals but are also sensitive to other toxic chemicals in high concentration. In low concentrations the chemicals initially stimulate the sense of a smell, but in higher concentrations trigger stimulation of the trigeminal nerve causing lacrimation, salivation, nasal discharge and even facial pain (chemesthesis).[†]

The taste buds and the gustatory system.

The taste buds are groups of brush cells that are sensitive to five specific aspects of a chemical's unique signature i.e. sweet, bitter, salt, sour and umami (yummy or high fat content). Food is partially dissolved and the odour of food is presented to the olfactory mucosa by retro-nasal olfaction. The combination of the taste bud sense and the odour gives food specific 'flavours'.

Solitary chemosensory cells (SCCs) and the diffuse chemosensory system (DCS).

SCCs are found in the larynx, trachea, the gut and tissues of endodermal origin. Some of them are like the VNCs in that they are microvillus cells with no axon synapsing on a secondary neurone. These may be the most ancient form of chemosensory cell. Different cell types respond to different chemical signals. Some may have developed later into taste bud cells and others developed different morphologies with secretory or endocrine functions. The widespread presence of SCCs throughout the tissues of the body forms the diffuse chemosensory system.

* Celeste R., Wirsig-Wiechmann CR. Function of gonadotrophin releasing hormone in olfaction, *Proceeds of the 1192nd meeting of The Keio* Medical Society in Tokyo, 2000 December 14, 81–85.

[†] Jayant M. Pinto. Olfaction. Proc Am Thorac Soc 2011 March 1; 8(1): 46-52.

system have been shown to be sensitive to odorous chemicals. $^{\rm 3}$

Brush cells are found in various sites around the body and may be the earliest type of SCC as they do not synapse directly onto neurones but often lie in close proximity to them. Morphologically they are similar to VNCs.⁴

TRPM5 cells are found predominantly in the taste buds, olfactory epithelium and the VNO but are also present as single cells or groups throughout the respiratory and gastrointestinal system.⁵

The VNS and survival

The VNS is sensitive to very low concentrations of chemicals such as pheromones that often have no discernible scent. Homeopathic medicines are also in extremely low concentration and so have no scent.

The system developed in animals to alert them to the danger of strangers in their territory and to improve social and reproductive functioning.⁶

The VNS is necessary for survival. It is an early warning system to alert the animal to the strange, the rare, the unusual and the dangerous in the environment. The VNCs are brush cells with a long basal root extending to the basement membrane but not synapsing on a secondary sensory cell. However the basal tip lies close to unmyelinated nerve cell fibres that are running in the lamina propria and may send signals to these fibres through the intercellular space.

There is still some controversy over whether the human VNS is functional because there are only a few active vomeronasal genes in the human genome. However only 5% of all genes in the human genome are expressed and the fact that a number of active vomeronasal genes have been found in humans indicates that it is possible for humans to sense pheromones.⁷

Recent research has indicated that there is a crossover between the VNS that senses non-odorous chemicals (e.g. some pheromones) and the main olfactory system (MOS) that usually senses odoriferous substances. It is now known that there is partial overlapping of these two chemosensory systems⁷ and brush cells expressing the TRPM5 transduction system have been found in the main olfactory epithelium.⁸

If homeopathic medicines are sensed by the VNS then this partial overlap of the two systems strengthens the idea that strong odours can affect the VNS and so the homeopathic response. If VNCs are lying in the main olfactory mucosa then strong odours stimulating the olfactory neurones and causing a large cascade of action potentials could interfere with the action of VNCs that have basal roots lying close to the unmyelinated olfactory neurones.

Odours and the homeopathic response

During the last twelve years, specifically looking for the phenomenon, I have observed that the homeopathic response can be upset by unusual smells in the patient's environment. I have now observed these effects and documented them in many patients.

Hahnemann had noted this and described the action of odours on his patients' responses in the Organon.⁹

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