

Olfaction Research, Clinic and Therapy: Where are we?

Giulio Cesare Passali

Catholic University of the Sacred Heart, Agostino Gemelli Hospital Foundation IRCCS, ENT
Clinic

giuliocesare.passali@unicatt.it

Dysosmia indicates the alteration of smell due to diseases of the peripheral or central structures. We have two different kinds of damages, one based on quality and one based on quantity, so we also have two different types of dysosmia. The quantity dysosmias are divided into: - hyposmia and anosmia, - hyperosmia. The quality dysosmias are divided into: parosmia - cacosmia, - fantosmia - presbhosmia - agnosia. The quantity dysosmias (in particular hypo-anosmias) are the largest part of dysosmias. The hypo-anosmias are classified into central and peripheral, and anosmias in particular are also divided into mechanical and perceptive anosmias. Mechanical anosmias are those that, despite the integrity of the neuroepithelium, respiratory and olfactory centers, can be determined by inflammation of the nasal mucosa or defective ventilation, or any pathological process that can hinder the arrival of the gas molecule carrier to the peripheral receptor. Perceptive anosmias are secondary to alterations of the neuroepithelium, olfactory tract and olfactory centers. They can be pure forms, which become mixed when they coexist with obstructive, mechanical forms. Dysosmias may also occur in patients who are affected by psychic alterations, or chronically exposed to chemical substances that may cause mucosal or nervous lesions (professional dysosmias). There are also several syndromes and diseases that may be related to an important loss of smell, such as congenital agenesis of the olfactory nerve (which can often be associated with the agenesis of the trigeminal nerve), the smell-genital syndrome, Klinefelter Syndrome, Turner Syndrome, von Willebrand Syndrome, and Kallmann Syndrome. Dysosmia can also occur because of careless medical and surgical maneuvers that can cause ethmoidal fractures, deviations of the nasal septum, post-traumatic atrophic rhinitis, cicatricial stenosis and bridges, alterations of the olfactory mucosa in general. Many medicaments can provoke dysosmias. In our experience, we studied more than 3500 patients with different olfactory alterations either mechanical or perceptive from which we made the clinical, scientific and therapeutic consideration presented.

Key words: dysosmia, hyposmia, anosmia, hyperosmia