



ORIGINAL ARTICLE

Long Term Serious Olfactory Loss in Colds and/or Flu[☆]

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PALABRAS CLAVE

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Abstract

Introduction: In the general population, we can find 2%–3% of lifelong olfactory disorders (from hyposmia to anosmia). Two of the most frequent aetiologies are the common cold and flu. The aim of this study was to show the degree of long-term olfactory dysfunction caused by a cold or flu.

Methods: This study was based on 240 patients, with olfactory loss caused only by flu or a cold. We excluded all patients with concomitant illness (66 patients), the rest of patients (n = 174) consisted of 51 men (29.3%) and 123 women (70.7%). They all underwent olfactometry study (I and V cranial nerve) and a nasal sinus computed tomography scan, as well as magnetic resonance imaging of the brain. Results were compared with a control group (n = 120).

Results: Very significant differences in levels of olfactory impairment for the olfactory nerve ($P < .00001$) and trigeminal nerve ($P < .0001$) were confirmed.

Conclusions: People who suffer olfactory dysfunction for more than 6 months, from flu or a cold, present serious impairment of olfactory abilities.

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Resfriado-gripe: pérdida grave del olfato a largo plazo

Resumen

Introducción: Las personas afectadas por pérdida olfativa total y de por vida se sitúan entre el 2 y el 3% de la población. Dos de las causas más frecuentes son los resfriados comunes y las gripes. El objetivo de este trabajo es mostrar el grado de afectación de las alteraciones olfativas sufridas, a largo plazo, a causa de un resfriado o una gripe.

Métodos: Este estudio se ha basado en la asistencia a 240 pacientes, aquejados de pérdida olfativa por resfriado o gripe. Fueron excluidos todos aquellos que padecían otras enfermedades

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intercurrentes (66 pacientes), el resto (n=174) estaba formado por 51 hombres (29,3%) y 123 mujeres (70,7%). Fueron sometidos a estudio olfatométrico (i y v par craneal) y tomografía axial computarizada nasosinusal, y resonancia magnética del sistema nervioso central (RM-SNC) comparándose el resultado con un grupo control (n=120).

Resultados: Se confirmó que la pérdida olfativa tanto para el nervio olfativo ($p < 0,00001$) como la alteración del nervio trigémino ($p < 0,0001$) eran muy significativas.

Conclusiones: La pérdida del olfato, pasados más de 6 meses desde su inicio supone una reducción grave de las capacidades olfativas de las personas afectadas.

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Introduction

Survey studies on the general population affected by olfactory pathology show that disorders in the sense of smell reach 19% of the population, ranging from 0.5% for anosmic individuals and 17% for hyposmic individuals, depending on whether you take international or local studies^{1,2}; for absolute loss of the sense of smell alone, the variation ranges from 2% to 3%. Among the most frequent causes are the common cold and flu.

The world-wide annual number of viral rhinitis causing cold and flu could be approximately 20 billion cases, all caused by both the cold virus (rhinovirus) and the flu virus (influenza).³ Not all of them have been diagnosed from the viral point of view. In Spain an incidence index is currently foreseen of 66.88 cases/100,000 inhabitants.⁴

The high levels of particles of human parainfluenza type 3 virus (HPIV3) found in the epithelial cells of the nasal turbinates of patients with postviral hyposmia suggest that HPIV3 is the cause of the postviral olfactory disorders.⁵ The true affectation of the population is much greater than the analytical verifications performed.

Patients whose olfactory problems are triggered after an infectious condition of the upper airway report distortion of smells.⁶ They generally refer to, due to cultural semantic reasons, as a loss of "taste" when what happens, in over 80% of these individuals, is that they present only the loss of the sense of smell and conserved that of taste (sweet, salty, acid, bitter, and umami). In all these patients, the majority recover their normal olfactory state, more or less quickly, but in a small segment (not negligible in absolute numbers) the partial or total loss of their sense of smell persists.

Studies indicate that viral infections of the upper airway are one of the main causes of hyposmia and that it improves in most patients when the viral symptoms resolve, but some patients present hyposmia as a sequela for months or permanently.^{7,8}

It has been reported that the loss of the sense of smell from cold/flu forms part of the 39% of olfactory disorders caused by upper airway involvement.⁴ It has also been indicated that, given how suddenly it is established, this loss of smell is accompanied by significant affective discomfort and loss of quality of life.^{9,10}

Among the 1166 cases of olfactory disorders attended in our otorhinolaryngology (ORL) service, dysosmias due to aetiologies of colds/flu correspond to 23.6% of all the cases (Fig. 1). It is worthwhile mentioning that, in our centre,

colds, and flu are the second cause of loss of sense of smell (the first is sinonasal polyposis), which is not the case in other centres.^{11,12}

The dysosmia produced by colds/flu is generally differentiated by the self-report given by patients of an episode of having had a cold or flu. In some cases, this reference is not so explicit, so it has to be elicited while taking the clinical history. From the point of view of a classic ORL examination, no lesions are evident at nasal level, not even using a fiberoptic endoscope. This fact, along with the lack of specific drug therapy for such disorders, leads to this type of pathology currently being classified as untreatable, as irreversible, which is a motive for terminating attention to the patients that suffer from it, telling them "not to waste their time because nothing can be done".

Our study is different from the normal studies on dysosmia after a cold in that most of such studies are carried out during acute phases or in very recent flu states, while ours is carried out on the long-term olfactory state.

The objectives of this study were as follows: firstly, show that this type of affectation can produce long-term olfactory loss, even lasting for life; secondly, demonstrate that the level of affectation of the olfactory disorders suffered is important; third, show that these disorders can be demonstrated (parameterised); fourth, show that these alterations can be diagnosed; and fifth, indicate the repercussions that lack of attention brings.

Methods

To carry out this study, we started on the basis of a group of 240 patients who attended our consultation for prolonged loss of the sense of smell (15 months on average), either at their own request or recommended by their family doctors, once they had been diagnosed with flu or a cold (according to World Health Organisation guideline, in each seasonal period in the health areas in our territory, for both flu and colds). We excluded from this group the patients who suffered from other intercurrent diseases, suspected of influencing the smell disorder (66 patients), such as sinonasal polyposis, allergies, neurological disorders, head injuries, etc. The rest of the patients (n=174) consisted of 123 women (70.7%) and 51 men (29.3%). (Fig. 2a). The distribution by age corresponded to 72% of patients between 40 and 60 years, of which approximately 30% (30.5%) were 50–59 years old (Fig. 2b).

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