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Rhinitis, not to sniff at

Already for years we have ample evidence of the severe impact of allergic and non-allergic rhinitis and maybe even more rhinosinusitis on quality of life of our patients and the severe costs these diseases inflict on society [1-4].

Despite this evidence we have difficulty convincing the politicians, health insurance companies and the public that more attention, research and money is needed to prevent these diseases to occur and to further prevent the sometimes serious sequalae of the disease.

In the last few years a number of studies have been performed in real life settings to measure the effect of primary and/or secondary prevention of rhinitis/rhinosinusitis on lower airway disease and the direct and indirect costs of the disease.

Last year the group of Hopkins showed the positive effect of early treatment of rhinosinusitis on the development of asthma and the costs of disease [5, 6]. In this issue of the journal Droessaert et al. show [7] that immunotherapy for allergic rhinitis is associated with higher control of allergic rhinitis, reduced symptom severity and reduced medication use at 3 years after the onset of treatment. Seventy percent of the patients treated with immunotherapy did not use medication for their allergic rhinitis anymore. Although these are very relevant data, we are still aware that immunotherapy is only given to a minority of the patients with allergic rhinitis [8-10]. One of the points that let doctors and patients doubt whether to start immunotherapy is the prediction of the treatment effect. One of the methods to measure immunotherapy effects is the use of provocation tests however these methods have significant methodological issues [11]. In this issue of the journal Sakurai et al. show that changes in levels of allergen-specific Th2 cytokine-producing cells and IL-10^{+}Foxp3^{+} cells could be objective biomarkers to predict the response to SLIT in early phases of the treatment [12]. It would be even better to try to predict the response to immunotherapy before the treatment is started and trials to try to achieve that are underway.

A specific symptom of rhinitis and rhinosinusitis that is often underappreciated is the loss of smell [13-16]. In earlier issues of the journal and other publications it has been shown that loss of smell is not only relevant in upper airway diseases but is also affected by several neurogenerative diseases and diabetes mellitus and even a primary indicator for the occurrence of Alzheimer's and Parkinson's disease [17-20]. Moreover, a relation exists between the olfactory system and the endocrine system with loss of smell in diabetes [21].

Recently, a number of papers point to new treatment options in olfactory loss giving hope to deprived patients. Olfactory training has been shown to be a promising therapeutic approach with which to improve olfactory skills in post-infectious anosmic patients but also in patients with neurogenerative diseases [22-24]. Insulin signalling has been implicated in olfactory function and nasally administered insulin can improve smell in post-infectious olfactory patients [21]. Now in this issue of the journal, Veyseller et al. show a positive effect of hyperbaric oxygen therapy on olfactory dysfunction in diabetic neuropathy in patients with type 2 diabetes mellitus [25]. We have exiting times in rhinologic research and expansion of our field and new treatment options for patients we not so long ago thought we could not help. Now we have to put all our efforts in convincing all but our patients that they need our help.

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