

Study examines treatment for olfactory loss after viral infection

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Treatment with a glucocorticoid medication, either alone or in combination with Ginkgo biloba, appears to significantly improve the sense of smell in individuals with previous olfactory loss due to upper respiratory infections, according to a report in the October issue of *Archives of Otolaryngology-Head & Neck Surgery*.

Olfactory loss [loss of the sense of smell] is common and can be caused by head trauma, chronic sinonasal inflammation and viral infections of the nose, according to background information in the article. "In particular, postviral olfactory loss is a complicated disease," the authors write. Upper respiratory tract viral infections are common and can be caused by numerous viruses such as rhinovirus, influenza viruses, parainfluenza viruses and respiratory syncytial viruses. "However, which viruses cause postviral olfactory loss is unknown, as well as who is susceptible to olfactory damage after the common cold." Therefore, olfactory disorder is not clearly understood, making treatment for the condition difficult.

Beom Seok Seo, M.D., of Seoul National University College of Medicine, Seoul National University Bundang Hospital, Seongnam, South Korea, and colleagues studied 71 patients (average age 53) who were diagnosed as having postviral olfactory loss from July 2007 to June 2008.

Patients underwent olfactory function tests, including a butanol threshold test (BTT), which examined patients' ability to differentiate N-butanol

from mineral oil with concentrations changing over 13 levels through each nostril; and the cross-cultural smell identification test (CCSIT), which examined odor identification through both nostrils for each patient. Follow-up tests were performed four weeks later. "Anosmia [absence of the sense of smell] was defined as concentration levels zero to three, severe hyposmia [reduced sensibility to odors] as levels four to five, moderate hyposmia as levels six to eight, mild hyposmia as levels nine to 10 and normosmia [a normal sense of smell] as levels 11 to 12," the authors note. Additionally, participants were randomly assigned to two treatment groups: 28 patients were treated with the steroid prednisolone for two weeks and 43 were treated with prednisolone for two weeks plus Ginkgo biloba for four weeks. All participants also used mometasone [a steroid used to relieve inflammation] nasal spray twice daily for four weeks.

"On the basis of the BTT results, 17 patients (24 percent) had anosmia, 25 patients (35 percent) had severe hyposmia, 23 patients (32 percent) had moderate hyposmia, 5 patients (7 percent) had mild hyposmia and one patient had normosmia," the authors write. "There was no statistically significant difference in the severity of postviral olfactory loss between the two groups."

Both treatment groups' BTT and CCSIT scores increased significantly after treatment. For the group taking prednisolone, the average BTT and CCSIT score changes were 1.4 and 0.9, respectively. For the group taking prednisolone with Ginkgo biloba, the average BTT and CCSIT score changes were 2.2 and 1.9, respectively. Treatment response rates on the BTT (defined as a score increase of three or more) were 32 percent in the prednisolone group and 37 percent in the prednisolone with Ginkgo biloba group. Treatment response rates on the CCSIT were 14 percent in the group taking prednisolone and 33 percent in the combination therapy group.

"Many more patients experience postviral olfactory loss and seek recovery of their olfactory function than otolaryngologists have previously thought," the authors conclude. "Postviral olfactory loss is caused by neurodegeneration of cells in the olfactory neural system. More clinical trials are required to evaluate drugs shown to be effective against neurodegeneration for the future treatment of olfactory disorder."

More information: Arch Otolaryngol Head Neck Surg. 2009;135[10]:1000-1004

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