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Off the scent By Dr. Kuljit Singh

At a typical Asian cuisine outlet, everyone would be enjoying the aroma of good food seeping through the doors of the kitchen. Imagine the feeling when the food is served. When the sensation of smell is lost, it is comparable to blindness and deafness. People who suffer from anosmia are unable to smell anything.

What is anosmia?

Wikipedia defines anosmia as lack of olfaction or a loss of the ability to smell. Many people may not realise they have this disorder until they encounter a situation whereby it is obvious that they had missed an odour or smell. It is distressing and could lead to depression in some. There is another condition called “hyposmia” where an individual’s ability to smell is diminished. He would be able to catch the smell only when the odour/fragrance intensity is high.

How do we smell?

The earliest research on the mechanism of smell was done in 1756 by Linnaeus, a Swedish botanist. Decades later, scientists have differentiated various molecules and described them as aromatic, fragrant, repulsive, ethereal, resinous, spicy, burned, putrid and so on. Smell must be either in gaseous or volatile liquid form for it to be perceptible.

In the roof of our nose are sensitive nerve endings and nerve cells that form the olfactory system. These can detect odours in the air. The level of sensitivity varies from person to person. Some animals have greater sensitivity to the smell of certain odours. We even have canines that can sniff out pirated CDs.

Our system of smell is unique as sensitivity would diminish upon continuous exposure to a particular smell.

An odour can also mask another, especially if one is much stronger, or the combination of the two yields no odour at all.

There are 16 chemical elements that produce odour: Hydrogen, carbon, silicon, nitrogen, phosphorus, arsenic, antimony, bismuth, oxygen, sulphur, selenium, tellurium, fluorine, chlorine, bromine and iodine. Halogen and ozone are also odorous elements.

Losing the smell sensation

It is postulated that when air flow towards the roof of the nose is blocked, the sense of smell would decrease. This occurs commonly when we suffer viral influenza which causes an inflammation within the nose.

Patients with allergic rhinitis would suffer the same fate as there would be inflammation that almost occludes the air passage. It prevents air flow carrying molecules containing substances which could stimulate the sense of smell from reaching the olfactory nerve endings. Nasal polyps, deviated septum, tumours and deformed bones within the nose could also contribute to anosmia.

Medications such as nasal vasoconstrictors could lead to a permanent anosmia, scientifically known as rhinitis medicamentosa. It also causes crusting and bleeding. Treatment is far from successful in these cases.

Other probable causes of anosmia would be tumours of the nose or brain, head trauma and a variety of endocrine, nutritional, Alzheimer's dementia, and nervous disorders.

Treating anosmia

It is difficult to promise recovery and total cure for anosmia. In some cases, if the probable cause is identified, the chance of regaining the sense of smell is encouraging.

The common treatment method would be to clear the offending obstruction in the nose. Inflammation caused by allergy or infection would be cleared with the use of nasal steroids and antibiotics. Polyps may have to be removed surgically if persistent, and other bony/cartilage deformities could be corrected.

Anosmic patients with nerve defects have less chance of recovery. Viral infections damage nerves and this is irreversible.

Hypothyroidism and poor control of diabetes mellitus may also slow down recovery of the olfactory system.

Nutritional deficits may be reversed with zinc, vitamin A, thiamine or any other specific nutrient that may be lacking. The evidence of its effectiveness is yet to be proven.

Many patients suffer anosmia due to unknown causes which are not amenable to specific treatment. Use of zinc sulphate is controversial as again, it has not been proven effective.

Other remedies such as vitamins and tricyclic antidepressants have been tested on some patients. It is advisable to eliminate toxins (eg. cigarette smoke, airborne pollutants).

Conclusion

Anosmia is not a life-threatening problem but it could be dangerous as sometimes poison fumes or the smell of fire are missed. This is common in many individuals and a proper nasal examination by an ENT surgeon would be warranted.

