



The curious relationship between **sinusitis** and **allergy**

A persistent stuffy nose could be a nose allergy, sinusitis or a combination of both, and they are often confused with one or the other. Even though their symptoms are very similar, the treatment involved is very different. **Dr Ralph Stanley**, an Ear, Nose & Throat (ENT) Surgeon at Gleneagles Hospital outlines the differences between these two ailments and the treatment options available.

Sinusitis is very common in Singapore, with about 20 to 25 per cent of the general population having some form of sinus infection at any point in time. However, sinusitis is generally under diagnosed because patients often think that they may have a recurrent head cold rather than chronic recurrent sinusitis. Nasal allergies also mimic and overlap in the clinical presentation.

What is sinusitis?

Sinusitis is a condition where the sinuses become inflamed and are unable to drain as a result of blockage to the natural openings of the sinuses, from allergies and infections. This is normally the result of bacterial, viral or fungal agents causing inflammation in the sinuses. Dr Stanley explains: "The triggers to this sinus infection are usually the result of viral infection of the upper respiratory tract due to a head cold or the result of an exacerbation of a chronic allergic response leading to total obstruction of the sinuses. This then, is the perfect situation for secondary bacterial infection to set in, leading to sinusitis."

Dental root canal infection can also lead to bacterial dental sinusitis. The roots of the molar teeth are in direct contact with the sinuses within the cheek bones, and any root canal infection can easily spread to the sinuses leading to acute sinusitis.

What is the relationship between sinusitis and allergy?

Sinusitis is not an allergy but a specific disease where the inflammation of the mucosal lining in the paranasal sinuses stems from a bacterial, viral or fungal agent. On the other hand, allergies are disorders of the immune system which is the result of an overreaction of the body's immune system to foreign substances such as dust mites.

Allergies can make a patient more susceptible to sinusitis but not the other way round. When a patient has a nasal allergy, also known as a "sinus problem", the nose lining is already swollen. If a patient gets a viral infection as in a head cold, this will cause further swelling of the nasal mucosa, leading to total obstruction of the paranasal sinuses. Under these conditions, bacterial infection can easily occur, resulting in acute or chronic sinusitis.

Acute sinusitis lasts under four weeks and sub-acute sinusitis for four to twelve weeks. If the symptoms persist beyond twelve weeks, it is classified as chronic sinusitis.

How to treat and prevent sinusitis?

While those who already have a nasal allergy stand a higher chance of having sinusitis, anyone can get it. Sinusitis can manifest from as young as infants up to adulthood and old age. "If there is no predisposing cause, it is usually an acute sinusitis and responds well to a course of antibiotics and nasal decongestants," said Dr Stanley.

The response to medical treatment in chronic sinusitis is not as good as acute sinusitis and is dependent on the duration and other aggravating factors like allergies and mucosal problems. An ENT specialist will be able to determine the predisposing causes of the sinusitis. For example, the treatment and prevention of nasal allergy and stuffy nose have to be managed together with an appropriate treatment of the sinus infection. The patient has to stop being exposed to the offending allergens, like cigarette smoke, which aggravates or predisposes the patient to sinus infection.

If the patient is allergic to house dust mites, then there should be no fabric curtains or furniture, as well as carpets in the bedroom, and everything on the bed should be wrapped by special material. If the patient has a dog or cat allergy, it is advisable not to keep pets. Alternatively, sprays that may reduce the allergen load from the pet's skin into the air may also be used.

The most common medication for long-term treatment of nasal allergies is an intranasal steroid spray. These are topical nasal sprays that are hardly absorbed into the body and hence, can be used safely for an extended period of time. This is usually prescribed together with antibiotics should there be an infection.

Surgery is the last resort for patients whose conditions cannot be alleviated by medication alone. Endoscopic sinus surgery, a minimally invasive procedure, aims to drain and reventilate the sinuses. It is performed under general anaesthesia by a transnasal route without any external facial incision. The obstructed sinuses are widened by removal of bone, diseased mucosa and the preservation of normal mucosa.

The latest surgical development is balloon sinuplasty. Under an image guidance or illumination technique, a catheter or tube is inserted into the sinuses. There is a balloon at the end of the tube, and when inflated under pressure, creates micro fractures in the bone around the obstructed ostium of the sinuses, which widens the obstructed opening. This procedure is performed under general anaesthesia and is sometimes combined with functional endoscopic sinus surgery.

"To date, balloon sinuplasty is perhaps suitable only for 10 or 20 per cent of patients with chronic sinusitis. The choice of the candidate for this surgical procedure has to be very stringent for optimal results, and is dependent on the sinus condition of the patient," says Dr Stanley.

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