Summary

Nasal pH has been the subject of sporadic interest for over half a century. The pH of normal nasal in normal people was reported to be within the range of 5.5 – 7.0 far back as 1941.

The nasal pH increases in rhinitis to 7.2-8.3. Both ciliary function and mucus viscosity have been shown to be pH dependent

Ciliary beating is the commonest method for mucus clearing in the nose and sinuses. Many factors affect efficient ciliary motion.

The optimum temperature for ciliary motion is between 32°C and 37°C. Infections may increase pH above the normal 5.5 to 7.0 range, which will destroy cilia.

Many viruses, including the rhinoviruses most often responsible for the common cold infect host cells by fusing with the cell membrane at low pH. Thus a mildly acidic environment is required for optimal infectivity of such pH-dependent viruses.

In this work, we study the nasal pH in normal individuals and in different nasal pathology (allergic rhinitis, infective rhinitis and nasal masses).

We measure nasal pH in 60 patients with different nasal pathology using litmus paper before and after using alkaline nasal wash, as well as 20 normal individuals as control to compare their results.

The study showed that there is significant increase in nasal mucosal pH in allergic, infective and nasal masses compared to normal individuals.

The study showed also, no significant change in nasal mucosal pH as regards age.

Significant improvement of nasal pH after using alkaline nasal wash in infective rhinitis, on contrary no significant changes occur in allergic or nasal masses groups.

Various studies are however needed to discover the effect of other isotonic, hyper- or hypo nasal wash and using saline nasal wash on nasal pH, also, discover relation between nasal pH and different factors as exercise, food, sleep as nasal pH regulates ciliary movement and subsequently mucociliary clearance.