# THE USE OF OMALIZUMAB IN THE TREATMENT OF NASAL POLYPS

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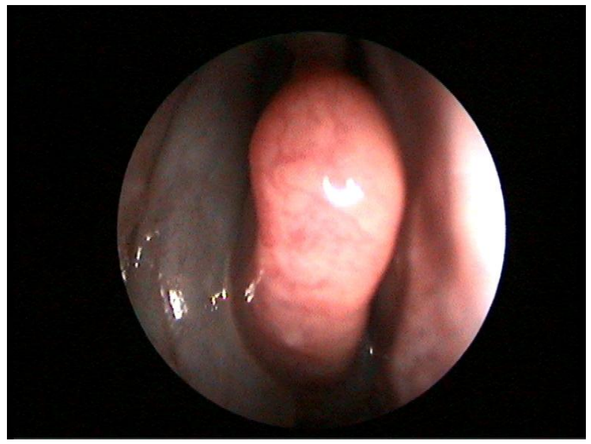
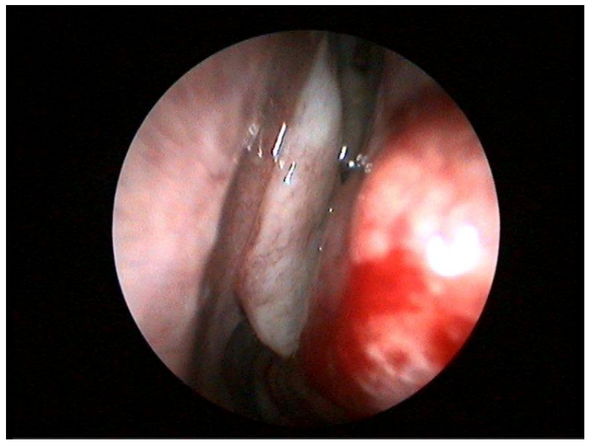
Allergic rhinitis and nasal polyps are associated with elevated serum immunoglobulin IgE levels. The allergens bind to IgE on the surface of basophils and mast cells, which releases histamine, leukotriens and others, following the symptoms of allergic rhinitis.

Does the removal of free IgE by the anti-IgE antibody, omalizumab, improve the symptoms of allergic rhinitis and reduce nasal polyps?





Endoscopical view of polyps before and after omalizumab administration to the first patient.

| PATIENT | FEV1 BEFORE | IgE IU/L | FEV1 AFTER | BODY WEIGHT | DOSIS Mg/month |
|---|---|---|---|---|---|
| 1 MALE | 65% | 569 | 69% | 78 | 450 twice |
| 2 FEMALE | 76% | 311 | 82% | 66 | 450 once |
| 3 MALE | 52% | 844 | 60% | 82 | 525 twice |
| 4 FEMALE | 81% | 112 | 88% | 75 | 300 once |
| 5 MALE | 69% | 492 | 77% | 90 | 375 twice |

We had 5 patients, 2 women and 3 men suffering from allergic rhinitis and asthma. The rhinoscopic endoscopy revealed nasal polyps. The computer tomography showed extended polypodiasis to 3 out of 5 patients. The other 2 had only polyps in the ethmoid cells. Omalizumab was administered subcutaneously at 2- or 4-week intervals according to body weight and total IgE (see above).
16 weeks later we had an endoscopical reduction in nasal polyps and an improvement in spirometry by all patients. The patients reported reduced use of corticoid sprays and an improvement in their quality of life, due to reduction of nasal symptoms of sneezing, itching, rhinorrhea and congestion. They all reported better sense of smell.

Omalizumab is effective in the symptoms of nasal congestion, anterior rhinorrhea, loss of smell, wheezing and dyspnea.  Omalizumab reduces the size of nasal polyps and improves the quality of life. This could be due to the local formation of IgE in nose and lungs.