

The Prevalence and Clinical Manifestation of Eosinophil Dominant Nasal Polyps in Taiwan

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Purpose:

Chronic rhinosinusitis with nasal polyps (CRSwNP) is used to divide to eosinophilic type and non-eosinophilic type. Eosinophilic inflammation has been found in most CRSwNP in the Western world. Eosinophilic infiltration is found in 65-90% of CRSwNP in white population. We are trying to report the prevalence and histopathologic characteristics of eosinophilic dominant nasal polyps (EDP) and non-eosinophilic dominant nasal polyps (NEDP) in Taiwan and to identify their difference in clinical manifestation.

Method:

410 cases of nasal polyps underwent FESS during Jan. 2008 to Dec. 2011 were retrospectively collected. Surgical pathology was reviewed for tissue eosinophils, mucosal glands, and basement membrane under high power magnification(X 400). EDP was defined as average of three hot zone > 5/HPF. Basement membrane was categorized to 4 groups: <5 μ m, 5-10 μ m, 10-15 μ m, and >15 μ m. SNOT-22 survey are obtained at pre-operation and post-operation at 2 week, 1 month and 3 months.

Results:

314 cases (76.6%) was EDP. In NEDP cases, more than half (53%) are neutrophil dominant. EDP cases have less mucosal glands and thicker basement membrane than NEDP. Patients with allergic rhinitis were more likely to present EDP. In clinical manifestations, postoperative symptoms improvement is significant compared to pre-operative symptom in both EDP and NEDP groups. EDP cases are less in “need to blow”, “sneezing”, “nasal obstruction” than NEDP cases at 3 months post-operation.

Conclusion:

From our study, prevalence of Taiwanese eosinophilic CRSwNP is 76.6%, which is higher than others Asian countries. Both EDP and NEDP cases can achieve significant symptoms improvement post FESS.

Keywords: Chronic rhinosinusitis, Nasal polyps, Eosinophil