

Efficacy of intralymphatic immunotherapy in allergic rhinitis: A systematic review and meta-analysis

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ABSTRACT

Background: Intralymphatic immunotherapy (ILIT) is a potential treatment option for allergic rhinitis (AR). **Objective:** We aimed to determine the efficacy and safety of intralymphatic immunotherapy in the management of patients with AR. **Methods:** An electronic literature search was performed using MEDLINE (1966 to December 2020), EMBASE (1974 to December 2020), and Cochrane Central Register of Controlled Trials CENTRAL (December 2020). A random-effects model was used to estimate the pooled prevalence with 95% confidence intervals. Quality assessment was done using the principles of the Grades of Recommendation, Assessment, Development and Evaluation approach. Heterogeneity was assessed using the I^2 statistic and at face value by comparing populations, settings, interventions and outcomes. This study is registered with PROSPERO (CRD42019126271). **Results:** We retrieved a total of 285 publications between March 2008 and December 2020, of which eleven satisfied our inclusion criteria. There were 467 participants with age ranged from 15 to 58 years old. The allergen was administered via superficial inguinal lymph nodes using ultrasound guidance. ILIT was given in 3 doses with intervals of four weeks between doses in ten trials. One trial gave 3 and 6 doses with an interval of two weeks. There was significant improvement of combined symptoms and medication score post treatment in ILIT group compared to placebo (SMD -0.49, 95% CI -0.91 to -0.06; $P = 0.020$; I^2 statistic= 71%; 4 studies, 99 participants; low certainty evidence) while no differences in other primary outcomes. **Conclusion:** The use of ILIT in the treatment of AR is promising. Trials with better design are required to establish its role in the management of AR.