Efficacy of endonasal phototherapy for relieving the symptoms of allergic rhinitis: Meta-analysis

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**Abstract:**

**Background:**   
  
Endonasal phototherapy can relieve the symptoms of allergic rhinitis (AR) for the patient. However, there is no consensus on whether or not endonasal phototherapy is effective in reducing the symptoms of AR.   
  
**Objective:**   
  
The goal of this meta-analysis was to perform a systematic review of the available literature on the effects of endonasal phototherapy on symptoms of AR.   
  
**Methods:**   
  
Two authors independently searched medical literature databases from their inception of article collection to July 2014. Studies that scored the nasal symptoms of AR and quality of life related to AR before and after endonasal phototherapy, and that compared the effects of phototherapy (treatment groups) with sham treatment (sham group) or antihistamine administration (antihistamine group) were included in the analysis. The outcomes of interest were total nasal symptom scores, disease-specific quality of life questionnaire assessments, and endoscopic findings (discharge and turbinate hypertrophy). Overall, a total of 13 trials met the inclusion criteria of this study, with a total sample size of 679 patients.   
  
**Results:**   
  
Phototherapy significantly reduced nasal symptoms compared with pretreatment values and improved quality of life. The endoscopic findings also significantly improved after phototherapy. In addition, the symptom score and disease-specific quality of life after treatment were significantly lower in the treatment group versus the sham group, and were similar to those in the antihistamine group.

**Conclusions:**   
  
Phototherapy could provide nasal symptom relief and improve quality of life related to AR. However, when considering the insufficient evaluation of the efficacy of phototherapy according to the treatment methods and the high heterogeneity apparent in some parameters, further clinical trials with robust research methodologies should be conducted to confirm the results of this study.