

## Effect of therapeutic pulsed ultrasound on smell dysfunction in subject with chronic rhinosinusitis - Atieh Nazem, - Tehran University of Medical Sciences

**Atieh Nazem,**

Tehran University of Medical Sciences, Iran

**Introduction:** Olfactory dysfunction is one of the main symptoms of chronic rhino sinusitis (CRS) caused by bacteria in the form of biofilm. Therapeutic pulse ultrasound (TPU), having anti-inflammatory effects and the ability to disrupt the strong walls of biofilms (community of bacteria), that can help relieve the symptoms of chronic sinusitis, one of the major symptom of which is olfactory dysfunction. **Methods:** A 47 year-old man who had contracted with CRS and subsequently his olfactory sense had declined gradually in the course of two years, underwent the pulsed ultrasound treatment for ten sessions, three days a week, on his maxillary and frontal

sinuses. CT-Scan and the sino nasal outcome test (SNOT-20) questionnaire were used to measure the severity of the symptoms as well as the Iran smell identification test (ISIT) was used to measure the degree of olfactory dysfunction. **Result:** Smell dysfunction and the severity of symptom in CRS were improved according to SNOT-20 and ISIT scales relatively; 80% improvement and 41% respectively. **Conclusion:** It seems that TPU can be effective to improve the olfactory dysfunction caused by CRS and the other symptoms of this, before and after treatment.