

Alcohol Responsiveness in Laryngeal Dystonia: A Survey Study

Dr. Kristina Simonyan and her research team at the Icahn School of Medicine at Mount Sinai, New York, conducted an on-line research study to investigate the effects of alcohol on symptoms of dystonia and tremor in a large population of patients. They have recently published the results of this survey and below are the abstract and lay summary. We thank all those in the SD community who participated in this survey.

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The full article on this study was published in the Journal of Neurology (2015): May 1

Lay summary of research

It has long been noted by patients and physicians alike that alcohol improves the symptoms in many patients with spasmodic dysphonia. However, this anecdotal finding has never been confirmed. Thanks to the NSDA community, we were able to survey 641 patients with isolated spasmodic dysphonia (SD, or laryngeal dystonia) and with spasmodic dysphonia combined with voice tremor (SD/VT). We found that more than half of patients in both groups thought that their voice symptoms improve to some extent after drinking alcohol. Patient's family and friends also noticed similar improvement. The duration of effect of alcohol on voice symptoms was thought to last 1 – 3 hours in both patient groups. Although alcohol is an interesting and potentially powerful agent, the results of this survey study **do not** imply or recommend alcohol consumption in any form in order to treat SD symptoms. However, this information may help us, the researchers, to start thinking about new and alternative pharmacological agents with effects similar to alcohol in order to develop more efficient treatment options for SD and other dystonias.

Abstract

Laryngeal dystonia (LD) is a task-specific focal dystonia of unknown pathophysiology affecting speech production. We examined the demographics of anecdotally reported alcohol use and its effects on LD symptoms using an online survey based on Research Electronic Data Capture (REDCapTM) and National Spasmodic Dysphonia Association's patient registry. From 641 participants, 531 were selected for data analysis, and 110 were excluded because of unconfirmed diagnosis. A total of 406 patients (76.5%) had LD and 125 (23.5%) had LD and voice tremor (LD/VT). The consumption of alcohol was reported by 374 LD (92.1%) and 109 LD/VT (87.2%) patients. Improvement of voice symptoms after alcohol ingestion was noted by 227 LD (55.9% of all patients) and 73 LD/VT (58.4%), which paralleled the improvement observed by patient's family and/or friends in 214 LD (57.2%) and 69 LD/VT (63.3%) patients. The benefits lasted 1-3 hours in both groups with the maximum effect after 2 drinks in LD patients ($p = 0.002$), whereas LD/VT symptoms improved independent of the consumed amount ($p = 0.48$). Our data suggest that isolated dystonic symptoms, such as in LD, are responsive to alcohol intake and this responsiveness is not attributed to the presence of VT, which is known to have significant benefits from alcohol ingestion. Alcohol may modulate the pathophysiological mechanisms underlying abnormal neurotransmission of γ -aminobutyric acid (GABA) in dystonia and as such provide new avenues for novel therapeutic options in these patients.