Coughing

The most common side effects associated with Vagus Nerve Stimulation therapy are hoarseness, throat pain and coughing.

Krüger et al. described how severe coughing and breathing issues were caused by a deep brain stimulation (DBS) system due to current induction in the adjacent vagus nerve. A 57-year-old man with Parkinson's disease (PD) who received bilateral subthalamic nucleus DBS presented with coughing and breathing difficulty when his DBS system was activated. The intensity of coughing was directly related to the amount of stimulation. When the DBS system was turned off, his cough resolved immediately. A system check revealed no radiographic abnormalities and all electrode impedances were within the normal range. They hypothesized that the coughing was caused by an induced electromagnetic stimulation of the vagus nerve from the extensions, which were running in close proximity to the nerve in the neck. Since the patient could not tolerate the coughing at stimulation settings required to ameliorate his PD symptoms, they ultimately exchanged the extensions and moved them further away from the vagus nerve. This resulted in immediate, complete, and continuous relief of the patient's symptoms¹⁾.

1)

Krüger MT, Hirmer TJ, Honey CR. Coughing as a Side Effect of Deep Brain Stimulation due to Peripheral Stimulation of the Vagus Nerve: Case Report. Stereotact Funct Neurosurg. 2019 Oct 10:1-5. doi: 10.1159/000503364. [Epub ahead of print] PubMed PMID: 31600763.

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