

## Is the beauty chip associated with the pathology of the larynx and voice?

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**Objective:** To determine the prevalence of laryngeal lesions in the examination of videolaryngostroboscopy scans in singers and actresses using intradermal hormonal implants.

**Design:** Retrospective study of professional singers and actresses who used intradermal hormonal implants and consulted at an otorhinolaryngology outpatient clinic for vocal evaluation.

**Methods:** Review of medical records of professional singers or actresses who consulted at the Otorhinolaryngology outpatient clinic of HUPE between 2017 and 2019. The fundamental frequency was measured in all patients and compared with historical norms, and the prevalence and character of laryngeal alterations identified in videostroboscopy were independently evaluated by 2 laryngologists and described.

**Results:** Ten actresses and singers who used intradermal hormonal implants were identified. All patients had evidence of Reinke's edema and all had high RSI scores suggestive of possible reflux. Seven patients had vocal fold lesions (5 cysts, 1 vocal nodule and one pseudocyst). The mean fundamental frequency was below the published norms (188 Hz compared to 212 Hz), but these differences were not statistically significant and may be due to vocal fold lesions, reflux or Reinke's edema.

**Conclusion:** A specific impact of hormonal implant chips on fundamental frequency or vocal pathology could not be identified in this study. The findings, however, that all patients presented Reinke's edema and other vocal lesions may suggest that there is a relationship between these implants and vocal pathology.

**Keywords:** Voice; Professional voice; Larynx; Voice quality.

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## Dissociation between vHIT and caloric test: A marker of Menière's disease? – A systematic review

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**Objective:** To analyze through a systematic review and meta-analysis the proportion of patients with Menière's dis-

ease who present altered caloric and vHIT tests and to determine the prevalence of dissociation altered caloric test and normal vHIT in the diagnosis of Menière's disease.

**Methods:** The literature search was performed without restriction regarding the publication period on indexed data platforms. Articles evaluating patients with Menière's disease who underwent caloric test and vHIT were included. Two researchers independently conducted the analysis of the articles, promoting the selection and extraction of data, following the recommendations of the PRISMA method. In case of disagreement during the selection process, a third evaluator was included for analysis. After data extraction, the study consisted of two stages. In a first analysis, the objective was to evaluate the prevalence of patients with Menière's disease who presented alterations in caloric and vHIT tests alone. On the other hand, in a second moment, the objective was to evaluate the prevalence of the combination of results of these two tests, through the combination of 04 groups: (1) caloric test and normal vHIT; (2) altered caloric test and normal vHIT; (3) calic and vHIT test altered; (4) normal caloric proof and altered vHIT.

**Results:** We included 12 articles from a total of 427 initially selected studies, published between 2014 and 2021, with a total of 708 patients evaluated and mean age of 52.72 years. The prevalence of patients with Menière's disease with altered caloric test was 64% (95% CI = 57–71%), while the prevalence of altered vHIT was only 28% (95%CI = 16–40%). The prevalence of altered caloric test dissociation + normal vHIT was 47% (95% CI = 37–57%).

**Discussion:** The dissociation of results in the caloric and vHIT test may be justified by the anatomophysiology of the ampolar crest, since the type II hair cells, with peripheral location, are responsible for low frequency stimuli and acceleration and are selectively affected in patients with Menière's disease. Thus, it is possible that Menière's disease causes an impairment in the vestibular apparatus responsible for processing low frequency responses.

**Conclusion:** The head-impulse test video and the caloric test consist of valuable tools for vestibular evaluation. The dissociation of findings between these two tests in patients with Menière's disease was more prevalent in this meta-analysis and may be the result of tonotopia of ciliary cells specialized in the ampolar crest, providing a possibility for the diagnosis of patients with this otoneurological condition.

**Keywords:** Menière's disease; Caloric test; Head-impulse test video; Ocular vestibule reflex.

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## Anatomic and radiological study of the uncinat process: A paradigm break

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**Objective:** To radiologically determine the anatomical variations of the upper region of the uncinat process.