

Aspirin intake may stop growth of vestibular schwannomas (acoustic neuromas)

January 24 2014

Researchers from Massachusetts Eye and Ear, Harvard Medical School, Massachusetts Institute of Technology and Massachusetts General Hospital have demonstrated, for the first time, that aspirin intake correlates with halted growth of vestibular schwannomas (also known as acoustic neuromas), a sometimes lethal intracranial tumor that typically causes hearing loss and tinnitus.

Motivated by experiments in the Molecular Neurotology Laboratory at Mass. Eye and Ear involving human tumor specimens, the researchers performed a retrospective analysis of over 600 people diagnosed with vestibular schwannoma at Mass. Eye and Ear. Their research suggests the potential therapeutic role of [aspirin](#) in inhibiting tumor growth and motivates a clinical prospective study to assess efficacy of this well-tolerated anti-inflammatory medication in preventing growth of these intracranial tumors.

"Currently, there are no FDA-approved drug therapies to treat these tumors, which are the most common tumors of the cerebellopontine angle and the fourth most common intracranial tumors," explains Konstantina Stankovic, M.D., Ph.D., Mass. Eye and Ear clinician-researcher and assistant professor of otology and laryngology, Harvard Medical School, who led the study. "Current options for management of growing vestibular schwannomas include surgery (via craniotomy) or radiation therapy, both of which are associated with potentially serious complications."

The findings, which are described in the February issue of the journal *Otology and Neurotology*, were based on a retrospective series of 689 people, 347 of whom were followed with multiple magnetic resonance imaging MRI scans (50.3%). The main outcome measures were patient use of aspirin and rate of vestibular schwannoma growth measured by changes in the largest tumor dimension as noted on serial MRIs. A significant inverse association was found among aspirin users and vestibular schwannoma growth (odds ratio: 0.50, 95 percent confidence interval: 0.29-0.85), which was not confounded by age or gender.

"Our results suggest a potential therapeutic role of aspirin in inhibiting vestibular schwannoma growth," said Dr. Stankovic, who is an otologic surgeon and researcher at Mass. Eye and Ear, Assistant Professor of Otology and Laryngology, Harvard Medical School (HMS), and member of the faculty of Harvard's Program in Speech and Hearing Bioscience and Technology.

Provided by Massachusetts Eye and Ear Infirmary

Citation: Aspirin intake may stop growth of vestibular schwannomas (acoustic neuromas) (2014, January 24) retrieved 4 May 2024 from <https://medicalxpress.com/news/2014-01-aspirin-intake-growth-vestibular-schwannomas.html>

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