



Letter to the Editor

Hearing Loss in Takayasu's Arteritis: A Role for Hyperbaric Oxygen Therapy?

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Dear Editor,

In the scientific community, there is growing interest regarding associated symptoms in Takayasu's arteritis (TA), an autoimmune condition that mainly affects the medium and large arteries^[1]. Hearing loss (HL) is a rare complication of TA that is often overlooked and has severe consequences on the quality of life. HL mainly presents as sudden sensorineural hearing loss (SSNHL) and responds to corticosteroid therapy^[2]. In the authors' opinion, the reasons for misdiagnosing HL in patients with TA are lack of evidence regarding this rare complication and because TA involves large caliber arteries, instead of small vessels that are typical of the inner ear.

The etiology of HL in TA remains unknown^[3]; it has been speculated that HL follows the elevation of serum immune complexes that deposits in the inner ear or reversible circulatory disturbances with hypercoagulability in response to the arterial disease^[2]. Noel et al.^[4] reported that the occlusion of small retinal vessels is a rare and severe microcirculatory complication in TA; common immunopathology mechanisms with HL could be hypothesized.

Available options presented in the literature for treating HL in patients with TA include steroids as a first-line therapy; however, steroid therapy may not be sufficient for restoring hearing, and its interruption has been reported to exacerbate HL^[2,5]. Hyperbaric oxygen therapy (HBOT), commonly used as a supplementary treatment for SSNHL, has never been reported for treating HL in patients with TA.

We recently used HBOT for a 36-year-old woman with TA, who had two SSNHL episodes in different ears in an 11-month period^[6]. The patient was unresponsive to high-dose intramuscular steroid therapy (8 mg/day betamethasone for 10 days) in the first episode. Two days after the second HL episode, which occurred 11 months after the first episode, we administered corticosteroid therapy in combination with 16 HBOT sessions (1 session/day, 6 days/week) and significant improvements in both ears, including the one that was unresponsive to steroid therapy, were observed. This unexpected clinical finding could support the involvement of inner ear microcirculation in patients with TA who have HL.

Although this was a single case finding and HBOT was administered together with steroid therapy, the significant recovery of HL in both ears following this therapeutic approach may be worth sharing with the scientific community. In conclusion, we recommend that awareness for inner ear involvement in TA should increase and that HL should be considered a possible complication of TA and should be treated with corticosteroid therapy and, after collecting further evidence, HBOT.

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