

## MENIERE'S DISEASE AND ALLERGY

Meniere's is a disease characterized by syndrome of endolymphatic hydrops and sudden episodic attack of vertigo associated with fullness of ear, tinnitus and unilateral fluctuating hearing loss (first described in 1861 by Prosper Meniere) hence named after him later on. It is further classified as cochlear Meniere's when symptom of aural fullness and/or tinnitus are more marked and vestibular one when vertigo component is more marked. The hearing loss is usually more marked in lower frequencies as compared to higher frequencies which is suggestive rather of acoustic neuroma. The fluctuating hearing loss mimics with multiple sclerosis in which the duration is longer and vertigo is usually not so acute and M.R. imaging with gadolinium demonstrates intramural plaques. M.R. imaging also rules out the vascular loop compression syndrome.

Meniere's disease although idiopathic by definition has been attributed to a variety of causes which include immune factors, metabolic and allergic origin. Possible role of allergy in Meniere's disease can be dated back to a paper of Duke in 1923<sup>1,2</sup> and increased level of circulating immune complex has been noticed in most of the patients (96%) in Meniere's disease. M.J. Derebery has observed in his series of 93 Cases of Meniere's disease, history of childhood allergy, nasal congestion and rhinitis in 80% cases and one-third of patients, felt that food provoked their symptoms of Meniere's disease and many patients also felt that weather and seasonal changes affect their symptoms of Meniere's disease.<sup>3</sup> In his another survey

of 1490 Patients, 734 respondents with Meniere's disease, 59.2% had possible air borne allergy and 40.3% had or suspected food allergies and 37% had confirmatory skin or in vitro testing for allergy.<sup>4</sup> The finding of Harris and others showed that labyrinth could process the antigen effectively and immunotherapy could have a definite role in the treatment of Meniere's disease. He has also found a 30% incidence of a positive 68 Kd. autoantibody in the serum of Meniere's disease patients which is presumed to be a heat shock protein 70.<sup>5</sup> Raised immunoglobulin-E levels has also been observed in Meniere's disease.<sup>6</sup> Elevated level of circulating immune complexes has been reported as observed in asthma allergic rhinitis and nasal congestion. Circulating immune complexes are deposited through fenestrated blood vessels to endolymphatic sac producing inflammation which may interfere with the endolymphatic sac filtering capability and this may result in toxic accumulation of metabolic products. The blood vessels of sac are peripheral and fenestrated and are also effected by histamine released in response to allergy any where else in body.<sup>7</sup>

The patients treated for symptoms of allergy by desensitization and with provocative food demonstrated decline in symptoms of Meniere's disease apart from allergic symptoms.<sup>8,9</sup> Thus a history of allergy in family should be enquired in detail along with provocative environmental factors including food specifically of cow's milk and dairy products which are supposed to be the most common allergen.<sup>10</sup> If enquired properly patient may

give history of improvement after withdrawal of certain food or after a religious or surgical fast, which can be again confirmed by provoking symptoms, by taking particular food or exposure to cold environment. In paediatric group, history of physical or acoustic trauma should be sought also.<sup>11</sup> Provocative food test can be performed, accuracy of test is quite good but requires continuous personal observation. One has to be alert while testing for wheat, potato, and beet as they lead to permanent pigmentation hence should not be tested intradermally and given only subcutaneously.<sup>12</sup> A food likely to cause severe reaction should be tested by injection

not by injection. That too in close observation. Shambaugh has proposed a childhood infection of mumps, herpes which may be carried to inner ear leading to low grade inflammation making the sac weaker and alteration of hormonal dysfunction or allergy can precipitate the syndrome.<sup>13</sup>

### CONCLUSION

In the patients of Meniere's syndrome immunotherapy should be tried apart from labyrinthine sedatives, diuretics, vasodilators, streptomycin and salt restriction.

M.K. Taneja  
Editor

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