

Editorial

Changing Status of Ear Diseases from the Viewpoint of a Doctor in a Far East Country

Modern tympanoplasty mainly developed in Europe and the United States in the 1950s because of the introduction of the microscope, prevalence of antibiotics, and clarification of the middle ear sound conduction system. East Asian countries have followed the progress of ear surgery in Western countries and have managed to keep up with them, particularly regarding stapes surgery, cochlear implant, middle ear implant, and skull base surgery, in the last century. I have served as an otologist/neurotologist in an academic hospital for 30 years and have experienced the progress and improvements in otology/neurotology.

However, I sometimes believe that ear diseases would be different in the next few decades because of surrounding conditions. Here I discuss the status of ear disease with Japan as an example.

The average life span of Japanese males is 80.79 years and that of females is 87.05 years according to a 2015 government report, which is the longest in the world. The most probable reason is the decrease in the incidence of infectious diseases since World War II. We often discuss how the number of patients with chronic otitis media (COM) and tympanic perforation has gradually decreased, with fewer opportunities to perform myringoplasty compared with that in the last century. The number of patients with COM who require mastoidectomy has also remarkably decreased. Under these circumstances, intracanal approaches, such as simple underlay myringoplasty and total endoscopic ear surgery, have been increasing in popularity for closing perforations. Regenerative methods using growth factors such as b-FGF have been introduced for myringoplasty, which would result in not requiring a surgery. These less invasive methods lead to better patient QOL and happiness. However, regarding some aspects, I am concerned that young doctors have few opportunities to learn conventional tympanoplasty and cortical mastoidectomy.

The incidence of middle ear cholesteatoma is considered to be <10/100,000, and the condition is caused by multiple factors such as Eustachian tube dysfunction, sequelae of inflammation, and dysfunction of ventilation in mastoid air cells. In my opinion, if problems with Eustachian tube dysfunction remain unresolved, the incidence and recurrence rate of cholesteatoma will not decrease, and we will continue to struggle with treating cholesteatoma. An old doctor paradoxically said "Once you have operated on 1000 ears, you need never see another patient."

The patulous tube has been one of the most interesting topics over the last decade. The pathophysiology and clinical tests for patulous tubes have significantly improved, with several treatments emerging. A doctor once said that one-third of cholesteatoma cases occur because of habitual sniffing owing to a patulous or near patulous tube. I hope that in some cases, the development of cholesteatoma is prevented by discontinuing habitual sniffing.

Japan is a typical example of an aging society. Individuals aged ≥ 65 years will account for 25% of the population in 2020 and 33% in 2050, and the total population began to decrease in 2007. Because senile hearing loss increases with age, senile hearing loss is expected to be a big problem in an aging society. Demands for hearing aids and middle ear implants are increasing, and proper medical services will be required by otologists, audiologists, and speech therapists. A study recently reported that senile hearing loss is closely associated with dementia and that better hearing contributes to preventing the progress of dementia. Japan was the first country to invent the middle ear implant in 1980s, but the implant did not extend to sensorineural hearing loss owing to the lack of sound transmission power. Europe and the United States have developed more powerful middle ear implants for patients with middle or severe sensorineural hearing loss. I hope these types of middle ear implants will be beneficial in an aging society.

I have described above the current and future status of ear diseases in Japan. Each country has different statuses of ear diseases; therefore, considering social and healthcare conditions in future academic papers will be beneficial.

Masafumi Sakagami, MD, PhD
Associate Editor
Professor and Chairman
Department of Otolaryngology-Head and Neck Surgery
Hyogo College of Medicine, Japan