

diagnosis of the offending pathogen. MRI is reported to have a higher sensitivity and specificity compared to nuclear imaging in the diagnosis of DFO and is considered to be the imaging modality of choice for final diagnosis. Recommended treatment duration is similar in both entities, however surgery is usually performed early in the course of DFO and only in a minority of cases of NOE. Repeated nuclear imaging for the evaluation of treatment response is not performed in DFO and follow up consists of physical evaluation and repeated measurements of inflammatory markers.

*Conclusion:* Appreciation of the similarities and differences between NOE and DFO may prove valuable in improving our understanding of NOE and advancing diagnosis and management.

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### Epidemiology aspects of CSOM (R616)

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#### Prevalence and Associated Factors of Chronic Suppurative Otitis Media: Data from the KNHANES 2009–2012

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*Learning Objectives:* 1. To investigate the prevalence of CSOM (Tympanic membrane perforation, Retraction pocket, and cholesteatoma) in South Korea 2. To investigate factors associated with CSOM.

Chronic suppurative otitis media (CSOM) is a common infectious condition that can cause hearing loss and persistent otorrhea. The prevalence rates of CSOM in developed countries is typically <1%, while developing countries or some racial groups showed higher prevalence rates exceeding 4%.

The Korean Society of Otorhinolaryngology-Head and Neck Surgery participated in the Korea National Health and Nutrition Examination Surveys (KNHANES), which is a cross-sectional analysis of a nationwide health survey. In the survey, physical examination, interview and laboratory test were performed by the field survey team including an otolaryngologist. Data obtained in 2009–2012 were included in this analysis.

Among the population over 4-years-of-age ( $n = 25,147$ ), the prevalence of CSOM was 3.13% (95% confidence interval [CI], 3.07–3.92). Specifically, the prevalence of tympanic membrane perforation, retraction pocket and obvious cholesteatoma was 1.78 % (95% CI, 1.51–2.00), 1.21% (95% CI, 1.02–1.40) and 0.34% (95% CI, 0.24–0.44), respectively. The prevalence of CSOM increased with age ( $P < .001$ ) and had a female predominance ( $P = .014$ ). In a multivariable analysis of associated factors in 14,396 participants over 19-years-of-age, hearing threshold, the presence

of tinnitus, diabetes, drinking alcohol, residence in a row house and education level of the mother were significantly associated with CSOM ( $P < .05$ ).

Understanding of epidemiologic data and associated factors might contribute to the better management of CSOM and reducing the social burden.

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### Epidemiology aspects of CSOM (R616)

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#### Epidemiology Aspects and Management of Chronic Suppurative Otitis Media in Viet Nam

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*Background:* Chronic Suppurative Otitis Media (CSOM) is an unresolved inflammatory process of the middle ear and mastoid, usually associated with tympanic membrane perforation, otorrhea from the middle ear for over than 12 weeks and hearing loss. CSOM can occur with or without cholesteatoma.

*Method:* Prospective study at 3 ENT hospitals in Hanoi, Danang and Ho Chi Minh city, Viet Nam that estimate the yearly incidence of CSOM to be 50 cases per 100,000 persons in children and adolescents aged 15 years and younger and 20 cases per 100,000 persons in 16–60 aged.

*Results:* Otorrhea, malodorous associated with cholesteatoma, hearing loss. Air conduction threshold is within 40 dB means Tympanic membrane (TM) perforation with intact ossicular chain, if air-bone gap is more than 40 dB is associated with discontinuity of ossicular chain.

*Physical findings:* defect in the pars tensa of TM or the pars flaccida or both atelectatic lesions in tensa or flaccida pars squamous epithelial invasion may invade middle ear granulomas, polyps, tympanosclerotic plaques in middle ear. Complications such as facial paralysis, labyrinthitis, cerebral abscess...When central nervous system involvement is suspected, MRI should be considered, Coronal CT scan is preferred.

*Medical treatment goals:* Infection control, stabilization of process, prevention of irreversible damage and development of serious complications.

*Surgical treatment goals:* Safe ear; dry ear; hearing ear.

*Conclusion:* The incidence of CSOM in Viet Nam: 4–6%.

*Complications can be life-threatening:* 32.03%. A good result in # 80% of the cases after surgery, hearing gained post-operation: 20–30 dB. Vietnamese Bioceramics is very good for ossicular chain reconstructive in tympanoplasty surgery.