REVIEW OF RISK FACTORS FOR MIDDLE EAR DISEASES

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Over time, a better understanding of the epidemiology of chronic ear diseases is emerging. Risk factors for middle otitis media with effusion are thought to be associated with their major impact on the function of the eustachian tube and the middle ear environment. Studies linking risk factors to the incidence of chronic otitis media are lacking, and most of the data are inferred from the apparent risk factors for acute otitis media. This is justified because it is assumed that recurrent acute otitis media probably predisposes a person to chronic suppurative otitis media. Age is a recognized risk factor for otitis media. Young children are more prone to otitis media due to the short length, small caliber and horizontal orientation of the eustachian tube. In addition to this anatomical disparity, children are more likely to have immature immune systems, making them more susceptible to viral and bacterial pathogens. Other risk factors include frequent upper respiratory tract infections, a history of allergies and a family history of otitis media. Social and environmental factors are also important. These include smoking and attending kindergarten. Improvements in housing, hygiene, nutrition, and other social factors have led to a significant reduction in the prevalence of chronic suppurative otitis media in some societies.

Certain ethnic groups have been found to have a higher risk of developing otitis media and therefore chronic otitis media. These include Southwestern American Indians, Australian Aborigines, Greenlanders and Alaskan Eskimos. Dysfunction of the eustachian tube with subsequent negative pressure in the middle ear has been found to be a cause of acquired cholesteatoma. For this reason, risk factors for otitis media that lead to long-term eustachian tube dysfunction are thought to coexist in cases of cholesteatoma. These include

ISSN 3060-4567

craniofacial anomalies and volvulus paste.Prevalence: Otitis media has been extensively studied over the past few decades, given that it is one of the most common diagnoses in primary care clinics worldwide. Its disease burden is widespread; It affects both developed and developing countries. Studies examining prevalence tend to be population-based and therefore the overall prevalence is difficult to establish.

In reviewing numerous population-based studies conducted over the past several decades, it appears that several subdivisions are identified based on the prevalence of chronic otitis media. The populations with the highest prevalence (as mentioned earlier) are Inuit (7% to 46%), Aboriginal (12% to 33%) and Native American (4% to 8%), followed by South Pacific Island (4% to 6%) and African (2% to 6%) populations. Lower prevalence is found in Asia and the Middle East (1% to 2%). The lowest prevalence rates are found in developed countries, including the USA, UK, Finland, Denmark and Israel, all of which have prevalence rates of less than 1%.

Fewer studies have examined the population prevalence of cholesteatoma. A study of patients in Iowa showed a prevalence of 0.01% and an incidence of 6 per 100,000. Interestingly, the prevalence of cholesteatoma is often opposite to that of chronic suppurative otitis media and is often more prevalent in developed countries. This may be secondary to neutral pressure in the middle ear caused by chronic perforation. For example, in a study in Serra Leone, where the incidence of chronic suppurative otitis media among 2015 children was 6.4%, only one child was found to have a cholesteatoma.

Classification of chronic ear disease Several classifications of otitis media have been described. Over several decades, agreement on the consistency of definitions and terminology has been reached in order to standardize research activities. The most commonly used current method of classification relates to the timing of symptom onset as well as associated complications. Consequently, there is a great deal of overlap in the terminology used for chronic ear diseases.Acute and chronic otitis media The spectrum of otitis media with intact tympanic

membranes is generally divided into three conditions: eustachian tube dysfunction, otitis media with effusion, and acute otitis media. Eustachian tube dysfunction refers to poor ventilation of the middle ear, which can lead to acute or chronic negative middle ear pressure, hearing loss, and otalgia. Eustachian tube dysfunction can lead to, which describes an effusion in the middle ear without significant signs of acute inflammation. This term has replaced designations such as serous otitis media or secretory otitis media. Within this category, there is also a temporal classification: acute effusion lasting less than 3 weeks, subacute effusion lasting from 3 weeks to 3 months, and chronic effusion lasting more than 3 months. Refers to inflammation of the middle ear that has a rapid onset and resolution. It is often associated with one or more systemic symptoms, including but not limited to otalgia, fever, and irritability.

Perforation of the tympanic membrane

There is no universally accepted classification scheme for tympanic membrane perforations. A perforation of the pars tens may be considered central or marginal depending on its location relative to the colliculus. Sometimes perforations are also described according to their size (pinpoint, intermediate). Perforations of the tympanic membrane can also be considered acute or chronic in nature. An acute perforation is most often the result of an attack of OOM. The natural history of acute perforation can develop in several ways. The perforation may heal spontaneously, the middle ear inflammation may disappear and the perforation may not close and become chronic, or the perforation may be associated with an ongoing middle ear infection with otohoea. If the perforation and infection have been present for at least 3 months, the ear may be classified as having chronic purulent otitis media.

Chronic suppurative otitis media has been unofficially subtyped according to several unofficial indicators. The infection, for example, can be considered active, intermittent, or immobile depending on the frequency and duration of otitis media. Another distinction can be made between cholesteatomatous and non-cholesteatomatous chronic ear. Finally, some

surgeons also classify as predominantly tubotympanal, atticoantral, or mixed subtype. Tubotympanic chronic otitis media is generally characterized by disease of the pars tensa and mesotympanum, whereas atticoantral disease primarily affects the pars flaccida and epitimpanum; however, this terminology is admittedly ambiguous and of uncertain utility.

Prevention and treatment of chronic middle ear disease require a comprehensive approach. This includes improving access to health services, promoting vaccination against common pathogens that cause middle ear infections, implementing strategies to reduce exposure to risk factors such as tobacco smoke and improving hygiene practices.

In conclusion, the epidemiology of chronic middle ear disease is a critical area of research. Understanding the prevalence, risk factors and impact of these conditions is essential for developing effective prevention and treatment strategies. By addressing the underlying causes and improving access to care, we can reduce the burden of chronic middle ear disease and improve the quality of life of individuals and populations affected by these conditions.

Chronic middle ear disease refers to a group of pathological conditions that affect the middle ear over a long period of time. These conditions are often the result of inadequate treatment or recurrent acute middle ear infections. Chronic middle ear disease can have a significant impact on a person's quality of life, causing hearing loss, hearing loss, pain and other complications. Understanding the definition and classification of these diseases is critical to developing effective treatment and prevention strategies.

The middle ear is a vital component of the auditory system, located between the outer and inner ear. It consists of the eardrum (tympanic membrane) and a complex system of small bones called ossicles. The middle ear is responsible for transmitting sound vibrations from the outer ear to the inner ear, where they are converted into electrical signals and interpreted by the brain.

Cholesteatoma is another chronic middle ear disease in which abnormal skin growth forms in the middle ear. It usually occurs as a result of chronic otitis

media or as a complication of a perforated tympanic membrane. Cholesteatoma can cause erosion of the ossicles and surrounding structures, resulting in hearing loss and other complications.

Adhesive otitis media, also known as ‘glue ear’, is characterised by a build-up of thick fluid in the middle ear. This condition is common in children and can lead to hearing loss and speech delay if left untreated. The cause of gluey otitis media is usually a dysfunction of the Eustachian tube, the narrow passage that connects the middle ear to the back of the pharynx. When the Eustachian tube does not open properly, it can cause fluid to build up in the middle ear.

Classification of chronic middle ear diseases is important to understand their underlying causes, clinical features and treatment options. The classification systems used may vary depending on the specific disease and the medical literature referenced.

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