Microtia

Health & Medicine

Microtia Introduction Microtia is a congenital deformity in which the pinna is very small and underdeveloped. This abnormality can be unilateral, affecting only one ear, or bilateral, affecting both ears. Unilateral microtia is most common, in which the right ear is affected more frequently than the left ear. A genetic disturbance results in microtia of the pinna. Many cases of microtia are categorized as idiopathic or of an unknown etiology. Occurring in 1 to 5, 000-20, 000 births, this deformity is more frequently seen in males. Fuller, Pimentel & Peregoy, 2011, 330). Microtia causes varying degrees of hearing loss and major cosmetic problems. Population In a study essay writer canada, " Melnick and Myranthopoulos reviewed auricular deformities and associated anomalies in a series of 56, 000 pregnancies in an ethnically diverse population (Caucasian 46%, African American 46%, Latino 8%), commenting on the incidence of anomalies and the embryogenesis and etiopathology of the varying deformities" (Lin, 2011). They found that microtia occurred in every 3 in 10, 000 births.

Microtia occurs in 1 per 900 to 1200 Navjo children and 1 in 4000 Japanese births (Fuller, Pimentel & Peregoy, 2011, 330). Time of Onset Microtia is a congenital deformity, meaning that it is present at birth. Receiving genes from both parents during development, microtia results from a defective gene in the early development stage of ear development. Since microtia occurs in utero, there is no easy fix for this abnormality until the child is ready for surgery to recreate the outer ear. Etiology Hereditary factors and vascular accidents in utero are both factors in the etiology of microtia.

Familial patterns are reminiscent that microtia is a result of multifactoral inheritance, including maternal rubella during the first trimester of

pregnancy. Microtia occurs when there is a problem with the development of the ear when a baby is still an embryo. Occasionally occurring due to an inherited fault, microtia more often occurs unexpectedly with nofamilyhistory. Symptoms “ Micro” means small and “ otia” means ea, so therefore, Microtia means having an irregularly small ear. Microtia is a deformity, resulting in a reduced size of the ear.

There are a variety of severity levels that occur within the pathology microtia. At times a bump of tissue is present in the location of where an ear would normally be found. In other cases, parts of the ear may be partially formed, just smaller than normal. There are four grades of microtia. Grade I is classified by a slightly small ear and a small but present external ear canal. Grade II has a partial external ear canal producing a conductive hearing loss. Grade III microtia, the most common, results with an absence of the external ear and an absence of the external ear canal and ear drum.

Grade IV has a total absence of the ear, referred to as anotia. (Coping, 2010) Hearing Loss With microtia, it would seem that a child would be unable to hear, however, in most cases, there is only a slight reduction of hearing. Microtia causes more of a cosmetic obscurity for many that are faced with this pathology. There is often times only a slight loss of hearing because we hear through both bony conduction, where sound travels through the skin and the bones of the skull and into the inner ear, and air conduction, in which the sound must travel down the ear canal and middle ear to reach the tympanic membrane.

Microtia effects air conduction the most, for the ear canal is smaller than normal, making it harder for sounds to travel through to the eardrum.

Treatment Options Although the outside of the ear contributes little to hearing, it does have several important cosmetic functions, such as supporting the wearing of eye glasses. Reconstructive surgery is offered to those who are born with microtia to help reconstruct ears. Multiple operations are needed to perform thisreconstruction, done usually in three to four stages. Artificial ears may also be used. Furthermore, there are surgeries that can be performed to improve hearing.

This kind of surgery involves drilling out the ear canal. This is usually a procedure used mainly for bilateral microtia patients. Works Cited Coping with and curing microtia. (2010). Retrieved from http://www. robertrudermd. com/microtia. html Fuller, D. R. , Pimentel, J. T. , & Peregoy, B. M. (2011). Applied antatomy & physiology for speech-language pathology & audiology. (p. 330). Lin, S. J. (2011, July 22). Microtia. Retrieved from http://emedicine. medscape. com/article/1290083-overview Luguetti, D. (2011, November 21). Microtia: Epidemiology and genetics. Retrieved from http://www. ncbi. nlm. nih. gov/pubmed/22106030