OPEN ACCESS Freely available online

Journal of Pharmacogenomics & Pharmacoproteomics

GENETICS AND VOICE PRODUCTION IN CHILDHOOD AND ADOLESCENCE – A REVIEW

Mette Pedersen

Washington State University, USA

Abstract

Background: A tumor microenvironment is a complicated multicellular system comprised of tumor cells, immune cells and blood Adolescence is a challenging time of change in voicing, normally and in pathology. An increased focus on voice production in relation to genetics can expand our knowledge of the onset of puberty and voice change. Our aim with this review was to connect research of genetics to voice production in adolescence. We need further understanding of the developmental background of voice in childhood and adolescence, because many genetic multi handicaps include voice production. Genetic development related to voice production was the focus in a search made by the Royal English Society of Medicine, with only a few results. We supplemented with references to genetic studies of adults and animals as well as adjacent areas of voice production. The genetic development of voice production is steered from the hypothalamus probably related to growth hormone. The genetic voice production in adults form the basis for understanding development. Some research results were found related to the pubertal steps. The findings are important in the future, using advanced voice analysis and artificial intelligence methods in patients with Multi handicaps.

Biography

2017 President and Chair at the Seventh World Voice Consortium Congress, Copenhagen, Denmark

2015 Honored Professor of Medicine, International Bibliographical Centre, Cambridge

1997 Thesis title: biological development and the normal voice in puberty, Gentofte University hospital ENT Dpt. lead by prof. M.Tos and Oulu University, Phoniatrics, Finland

1975 Ear-Nose-Throat specialist Copenhagen

1965 Medical final university examination, Copenhagen.