

## ABSTRACTS

## Literature review

## LR01

**"Have a safe flight" without barotraumas**

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Keywords: allergic rhinitis, barotrauma, ENT

**INTRODUCTION/OBJECTIVES:** The beauty of the skiers is invaluable for millions of air travelers. A proportion of them have ENT conditions. Otic barotraumas in air transport involve usually traumatic inflammation of the middle ear caused by a pressure difference between the air in the middle ear and the external atmosphere, developing after ascent or more usually descent. This can affect passengers as well as flight attendants or pilots. This type of barotrauma is much more common in patients with allergic rhinitis (AR), due to inflammation of the membrane of the nose and especially inflammation of the orifice of the Eustachian tube. Our aim is to shine some light on the importance of prophylactic methods for patients diagnosed or suspected of having AR so that they do not suffer from middle ear barotrauma (MEB).

**MATERIALS AND METHODS:** We conducted a literature search in the PubMed database concerning barotraumas and ENT conditions.

**RESULTS:** Patients with AR should follow hygiene measures and also knowing and avoiding allergens and using equalization techniques before flights. Treatment with oxymetazoline or fluticasone can be administered intranasally, 30 minutes before descent, to facilitate middle ear equalization. Pseudoephedrine decongestants can reduce otalgia in recurrent ear pain during air travel. Indirect moxibustion may also have a good clinical effect on the overall treatment of AR. For pilots and flight attendants a nine-step inflation-deflation tympanometric test can be used. This can provide information about Eustachian tube function to reduce the risk of recurrence of MEB.

**CONCLUSION:** For a more pleasant flight, travelers should consider these methods of decongestion.

## LR02

**ALZHEIMER – FEELING YOUNG, MIGHT FORGET LATER**

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Keywords: Alzheimer, beta-amyloid, brain, test

**INTRODUCTION/OBJECTIVES:** Alzheimer's disease (AD) affects about 17 million people worldwide, causing serious disorders of memory and cognition. This condition is caused by elevated levels of beta-amyloid ( $\beta$ -A) in the brain, leading to the degeneration of brain cells. Elevated  $\beta$ -A is neurotoxic and causes oxidative stress in the brain, which leads to neurodegeneration and dementia. At present, no sensitive and cost-effective method is available for the detection of  $\beta$ -A. Our aim is to shine some light on the importance of making this blood test a regular screening procedure.

**MATERIALS AND METHODS:** We systematically reviewed multiple papers focused on the development of a fast and inexpensive test to diagnose the early stages of dementia caused by AD.

**RESULTS:** When a patient complains of forgetfulness, a neurologist may not know immediately whether this is due to AD. Diagnostic tools to detect AD are either invasive like cerebrospinal fluid biomarkers or costly like PET-CT. We determine the modification of the secondary structure of  $\beta$ -A in human blood. Besides different types of scans and immunoassays, to estimate the amount of  $\beta$ -A in the brain, the blood tests measuring the hallmark AD's protein,  $\beta$ -A, could reduce the cost of clinical trials and potentially open the door to treating the disease earlier. The best-performing blood test identified people with elevated  $\beta$ -A levels with an accuracy of about 85%.

**CONCLUSION:** As it is crucial to diagnose AD as early as possible, we believe that this test could be the key of screening, prognostic and diagnosis.