

STSM report

Multidisciplinary approach to diagnose and treat tinnitus

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Place – Tinnitus Clinic – Del Bo Tecnologia per l’ascolto , Milano, Via Santa Sofia 29

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Grantee – Marzena Mielczarek (Department Of Otolaryngology, Oncological Laryngology, Audiology and Phoniatics, Medical University of Lodz, Poland)

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Introduction

Tinnitus is a complex phantom auditory perception, resulting from auditory and not-auditory pathologies. Despite intensive and advanced research being conducted all over the world, there is no single method of tinnitus treatment. One of the possible reasons for this situation is a complexity of the issue. Since in the majority of the cases we /medical healthcare providers / deal with patients with subjective tinnitus, we cannot register and objectively measure this symptom. Thus some indirect methods to assess tinnitus and its impact on life quality are in use in everyday practice. The other difficulty is that in many cases we often find in one patient few possible reasons for tinnitus generation, especially in elderly. In such cases, to give these patients adequate and satisfactory tinnitus service, multidisciplinary approach is necessary. The standard most advantageous for the patient is when team of specialists providing diagnostics and treatment for tinnitus sufferers is located in one centre. Such conditions enable easy communication between diagnostic and therapeutic staff, thus making common final decision about the best treatment option. Such an example centre for tinnitus patients is Tinnitus Clinic in Milano where STSM took place in December 2016.

Purpose of the mission

The purpose of the STSM mission was to gain experience in work with a multidisciplinary team of specialists in tinnitus centre. Furthermore, to follow the protocol of tinnitus management: detailed diagnostic procedures, summary of diagnostic process, final diagnosis, and implementation of therapeutic methods together with follow up. Basing on wide experiences gained working in Tinnnet project, the grantee plans to create tinnitus sub-unit within home otorhinolaryngological clinic.

Description of the work carried out during a mission

The protocol of tinnitus management in Tinnitus Clinic in Milano

1. Otolaryngological / audiological consultation - taking detailed medical history with a focus on tinnitus (assessment in VAS for intensity, annoyance, impact on life), hearing, and hyperacusis (form of tinnitus / hyperacusis history)
2. The patient filled in TRI questionnaire (Italian validated version)
3. Detailed and complex otorhinolaryngological examination, temporomandibular joints and masseters examination, postural / spine examination if applicable.
4. Balance system examination if balance disorders coexisted (Romberg, Unterberger, finger-nose tests, spontaneous nystagmus registration, postural testing, head impulse test, head shaking test)
5. Audiological diagnostics – pure tone audiometry (with high frequency audiometry), free field audiometry, speech audiometry, speech audiometry in noise. If the patient was a hearing aid user – the battery of the tests was repeated for unaided ears and in hearing aids.
Tinnitus psychoacoustic assessment: pitch and loudness, minimum masking level, tinnitus mixing point
Impedance audiometry – tympanometry, acoustic reflex registration, Eustachian tube tests
Otoacoustic emission registration – DPOAE @ 8 point/octave
6. Summary of the above results by audiologist / otolaryngologist together with a final diagnosis and treatment indications with a focus on audiological rehabilitation.
7. Further diagnostic/therapeutic indications – head radiological diagnostics, cervical spine assessment - if needed;
Consultation of maxillofacial surgeon, consultation of osteopath, chiropractor, neurologist, neuropsychiatrist, psychotherapist, geneticist.
In case of Eustachian tubes' dysfunction – set of examinations of the soft palate muscles and masseters.
8. Final audiological consultation - TRT implementation. Detailed explanation of tinnitus causes with a focus on individual case. Noise individual generators / hearing aids fitting. Counselling for sound therapy.
9. A set of psychological consultations and psychotherapy included in TRT therapy.
10. Follow up after one, three, six, twelve month – audiological assessment (pure tone and speech audiometry, free field audiometry, audiometry in noise), assessment of tinnitus treatment results (THI, VAS).

Furthermore, the Host Institution organized training in new technologies offered by Starkey for hearing loss and tinnitus patients.

Description of the main results obtained

Work with an experience team of specialists dedicated to tinnitus allowed to widen experience in complex diagnostic and therapeutic approach in tinnitus patients with a focus on effective and innovative audiological rehabilitation. Fruitful discussions at every stage of diagnostic and therapeutic process will allow to improve in-depth analysis of every individual case of tinnitus / tinnitus + hearing loss or hyperacusis patient. Thus, enriching theoretical knowledge

and practical skills will improve the quality of medical and rehabilitation management in tinnitus patients in everyday practice in home institution of grantee. Experiences from the mission will be extremely valuable in future formation of tinnitus sub-unit in otorhinolaryngological department.