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Medically Unexplained Otorhinolaryngological Symptoms: Towards Integrated Psychiatric Care

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Objective: To evaluate the presence of medically unexplained otorhinolaryngological symptoms in a patient cohort and propose an interdisciplinary approach for their care.

Study Design: Prospective cohort study.

Methods: The study describes the population of patients presenting consecutively at the Department of Otorhinolaryngology at the Maastricht University Medical Center. Patients with symptoms who did not meet clear "medical" criteria and were associated with psychological distress and high health care utilization were enrolled in the study by two experienced otorhinolaryngologists following informed consent. The aim of the study is 1) to specify the presence of medically unexplained otorhinolaryngological symptoms and 2) to evaluate the integration of otorhinolaryngological and psychiatric treatment in an interdisciplinary approach in order to help otorhinolaryngologists improve patient care.

Results: Of the 102 patients included, 41% (N = 42) did not have a proven somatic otorhinolaryngological diagnosis. For only 10.8% (N = 4) of the latter, no psychiatric diagnosis had been established. Overall, 78% of the study population (N = 80) was diagnosed with psychiatric morbidity/comorbidity, as defined in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition.

Conclusion: The preliminary data suggest that the majority of patients with these unexplained complaints may suffer from under- or undiagnosed psychiatric morbidity. Therefore, easy access to integrated interdisciplinary care (otorhinolaryngology and psychiatry) should be offered to patients with medically unexplained otorhinolaryngological symptoms after detailed information is made available to them about the pathogenesis of the complaints and the foreseen psychosomatic approach.

Key Words: Psychiatric comorbidity, unexplained otorhinolaryngological symptoms.

Level of Evidence: 2b.

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INTRODUCTION

Medically unexplained otorhinolaryngological symptoms (MUORLS) are common in tertiary care settings, although exact prevalence rates are unknown.[1] In general, medically unexplained symptoms frequently accompany psychiatric disorders.[2] Nonetheless, psychiatric morbidity/comorbidity is consistently underrecognized, which precludes effective treatment.[2] Given that MUORLS are associated with high impairment, health care costs, risk of iatrogenic damage, and frustration among both physician and patient, it is critical to improve early detection.[3,4] The first step is to identify the underlying disorder, which might be psychiatric, through a diagnostic process that could be lengthy due to the somatic focus of the physician and thereby delay successfully targeted interventions.[5,6]

For some otorhinolaryngological (ORL) subcategories such as oropharyngeal dysphagia, benign paroxysmal positional vertigo, and tinnitus, affective symptomatology such as depression, phobia, or anxiety has been reported.[7,8] However, the Dutch evidence-based guidelines on various ORL pathologies/complaints still do not help the physician recognize and label MUORLS because these guidelines do not cover integrated care. Notably, consultation-liaison psychiatry and psychosomatics are not part of that recommendation.[9,10]

The current study investigates presentation with MUORLS in a patient cohort and, if present, proposes an integrated interdisciplinary approach (ORL and psychiatry) for their care. Ultimately, this could yield guidelines for multidisciplinary diagnosis to be followed by otorhinolaryngologists. Successful diagnosis not only helps control health care costs but also improves patient care because MUORLS are associated with significant impairment, especially in patients with psychiatric comorbidity.

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TABLE I.
Variables of Interest Associated With Medically Unexplained Otorhinolaryngological Symptoms.

	Variable	Definition
1	ORL complaint	Nature and/or topography of the subjective ORL complaint
2	ORL somatic diagnosis (if present)	Established or proven somatic ORL diagnosis
3	Other somatic diagnosis (if present)	Established or proven somatic diagnosis outside the ORL region
4	Number of disciplines for ORL complaint	Number of medical disciplines and allied health professions involved in the care program for the specific subjective ORL complaint
5	Number of disciplines for other complaints	Number of medical disciplines and allied health professions involved in the care program for other (non-ORL) complaints
6	Number of visits to ORL outpatient clinic	Number of visits to the ORL outpatient clinic for the specific subjective ORL complaint
7	Number of additional (instrumental) examinations	Number of additional (instrumental) examinations for the specific subjective ORL complaint
8	Number of ORL surgical interventions	Number of surgical interventions for the specific subjective ORL complaint
9	Number of other surgical interventions	Number of surgical interventions for other (non-ORL) complaints
10	ORL treatment	ORL treatment for the specific subjective complaint
11	Psychiatric diagnosis	Final psychiatric diagnosis underlying the specific subjective ORL complaint
12	Psychiatric treatment	Final psychiatric treatment to manage the specific subjective ORL complaint

ORL = otorhinolaryngological.

MATERIALS AND METHODS

Data Collection

Participants. Patients with MUORLS were recruited from the Department of Otorhinolaryngology at the Maastricht University Medical Center (MUMC). Their complaints were heterogeneous: dizziness, postnasal drip, nasal airway obstruction, pharyngeal globus sensation, upper airway distress, gagging while eating, tinnitus, and so forth. There were several exclusion criteria: not willing to cooperate with an integrated interdisciplinary approach; suffering from severe depression with suicidal behavior or already having a known psychiatric diagnosis or using antidepressant and/or anxiolytic drugs; not being able to understand the integrated interdisciplinary advice due to cognitive impairment; being under 18 years; and not adequately understanding the Dutch language. None of the patients were in a palliative state of disease. Informed consent was obtained from all patients.

Study Design and Setting

Patients with no clear "medical" explanation for their symptoms who had associated psychological distress and/or high health care utilization were enrolled in the study by two experienced otorhinolaryngologists (L.W.J.B. and R.VDB.) from December 2011 to December 2013. These somatic specialists served a gate-keeping function and as a last resort. Patients were referred by general practitioners, ORL specialists from other hospitals, or medical practitioners from other health care facilities. By their very nature, unexplained symptoms are vague or difficult to characterize, which hampers differential diagnosis. Therefore, all patients underwent a structured interview, a standardized clinical ORL examination, and additional diagnostics (instrumental examinations, imaging, etc.), depending on the kind of symptoms and the Dutch evidence-based guidelines on the various ORL pathologies/complaints.[9,10] Examinations such as computed tomography scanning of paranasal sinuses, endoscopy of the upper aerodigestive tract, videofluoroscopy of swallowing, electronystagmography with caloric and rotatory testing, and magnetic resonance imaging scanning of the brain were performed to detect and/or rule out somatic causes of the complaints. These examinations were often performed before the patients met our two last-resort otorhinolaryngologists. The included patients had complaints in the ORL topographic region without a somatic substrate in the end-organ or with a somatic ORL diagnosis that did not fit the subjective complaints. This means that the subjective complaints showed a discrepancy with the outcome of clinical and instrumental examinations. Patients were acquainted with the psychiatrist during a joint consultation in the ORL outpatient clinic. Following this first informative and motivational consultation, patients with a psychiatric diagnosis or lack of coping skills were invited to visit the outpatient clinic for hospital psychiatry and medical psychology at the MUMC in order to undergo further structured clinical psychiatric investigation. Depending on the diagnosis (anxiety disorder, depressive disorder, somatoform disorder, etc.) mental health care took place as indicated.[11]

Given the patients' fear of stigmatization, the otorhinolaryngologists were not able to convince all patients with confirmed MUORLS of the benefits of an integrated interdisciplinary approach that draws upon an experienced psychiatrist at the same hospital. In patients diagnosed with psychiatric comorbidity who consented to accept psychiatric treatment (i.e., pharmacological intervention and/or psychotherapy), follow-up took place either in the integrated ORL-psychiatry setting (in cases of somatic and psychiatric comorbidity) or in the hospital psychiatry and medical psychology outpatient setting alone (in cases of medically unexplained symptoms and psychiatric morbidity).

Data Analysis

Variables of Interest. Diverse variables were analyzed for the current study (Table I). These were selected to reflect the burden on the patient and the health care system. They also

TABLE II.
Frequency Distribution of the Otorhinolaryngological Complaints in the Study Population (N = 102).

ORL Complaint	N (%)
Dizziness/vertigo	53 (53.0)
Pharyngeal globus	14 (14.0)
Dysphagia	8 (8.0)
Nasal obstruction	6 (6.0)
Dysphonia	5 (5.0)
Choking	4 (4.0)
Tinnitus	4 (4.0)
Discomfort tracheostomy	2 (2.0)
Stridor breathing sounds	1 (1.0)
Snoring with fatigue	1 (1.0)
Postnasal drip	1 (1.0)
Tubair catarrh sensation	1 (1.0)
Missing values	2 (2.0)

ORL = otorhinolaryngological.

TABLE III.
Frequency Distribution of the Otorhinolaryngological Somatic Diagnoses in the Study Population (N = 102).

ORL Somatic Diagnosis (if present)	N (%)
No somatic diagnosis	42 (41.2)
Vestibulopathy (vestibular migraine, Menière's disease, BPPV, utricular dysfunction, etc.)	34 (33.3)
Otopathy (hearing loss, recurrent otitis, myringosclerosis, etc.)	7 (6.9)
Head and neck cancer with various stages, locations, etc.	7 (6.9)
Chronic rhinopathy (polyps, rhino sinusitis, maxillary sinus cyst, etc.)	5 (4.9)
Obstructive sleep apnea syndrome	4 (3.9)
Benign vocal fold pathology (paralysis, polyps, cysts, etc.)	3 (2.9)
Missing values	0 (0)

BPPV = benign paroxysmal positional vertigo; ORL = otorhinolaryngological.

indirectly reflect the delay in care due to a difficult differential diagnosis and to multiple diagnostic examinations or visits to exclude somatic causes for the complaints. The variables include the number of visits to the ORL outpatient clinic or other departments, number of additional (instrumental) examinations, number of surgical interventions, and so forth (Table I).

Statistical Analysis

Descriptive statistical data are presented in Tables II, III, IV, V, VI, and VII.

RESULTS

Characteristics of Participants

One hundred and two patients with MUORLS were included (total N = 102; 58♀ and 44♂). They were receptive to an integrated multidisciplinary approach (ORL and psychiatry) in order to screen for or diagnose psychiatric morbidity/comorbidity. Their median age was 60 years (25th, 75th percentile: 49; 68 years).

Results of the Descriptive Statistics

Table II presents the frequency distribution of various subjective ORL complaints for the study population. Fifty-three percent of the patients (N = 53) reported dizziness, and the second-largest group mentioned pharyngeal globus sensation (N = 14; 14.0%). Table III shows the frequency distribution of the ORL somatic diagnoses for the total study population. Forty-one percent of the patients (N = 42) did not have a proven somatic ORL diagnosis. Out of this share, 10.8% (N = 4) did not have an established psychiatric diagnosis. Table IV shows the data on health care consumption in the present population. The number of disciplines involved, visits to the outpatient clinics, and (instrumental) examinations for the ORL complaint and other (non-ORL) complaints were reported. Furthermore, ORL surgery in the topographic area of complaint and interventions for other (non-ORL) disorders/complaints were registered (ventilation tubes, nasal septum correction, microlaryngeal surgery, etc.). The median number of visits to the ORL outpatient clinic was six, and the median number of additional (instrumental) examinations was four. Table V shows the frequency distribution of the ORL treatment that was given to the patients for their unexplained complaints. More than half of the patients did not receive an ORL treatment (N = 68; 68.0%). Twenty-four patients (24.0%) received a nonpsychotropic drug

TABLE IV.
Descriptive Data of Health Care Consumption in the Study Population (N = 102).

	Variable	Median (25th percentile; 75th percentile)	Range (min–max)
1	Number of other somatic (non-ORL) diagnoses	2 (0; 4)	0–13
2	Number of involved disciplines for the specific subjective ORL complaint	1 (1; 1)	0–3
3	Number of involved disciplines for other (non-ORL) complaints	0 (0; 1)	0–9
4	Number of visits to the ORL outpatient clinic	6 (4; 10)	1–92
5	Number of additional (instrumental) examinations	4 (2; 9)	0–57
6	Number of ORL surgical interventions	0 (0; 0)	0–3
7	Number of other surgical interventions	0 (0; 0)	0–4

ORL = otorhinolaryngological.

TABLE V.
Frequency Distribution of Otorhinolaryngological Treatment in the Study Population (N = 102).

Variable ORL treatment	N (%)
No ORL treatment	68 (68.0)
Drug/pharmacological treatment	24 (24.0)
Surgical treatment*	5 (5.0)
Outpatient follow-up	3 (3.0)
Missing values	2 (2.0)

*Some patients underwent more than one surgical intervention (ventilation tubes in tympanic membrane, microlaryngoscopy for benign vocal fold lesions, nasal septum correction, rhinoplasty, etc.)
ORL = otorhinolaryngological.

treatment for the complaints (topical nasal steroids, systemic steroids, antibiotics, etc.). Table VI represents the frequency distribution of the psychiatric diagnoses. Seventy-eight percent of the study population (N = 80) was diagnosed with a psychiatric morbidity/comorbidity based on the definitions of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition.[12] The most frequent diagnosis was anxiety disorder (N = 31; 35.2%). Furthermore, depressive disorder and undifferentiated somatoform disorders were common, N = 20 (22.7%) for both. Only 9.1% (N = 8) of the patients were not diagnosed with a psychiatric disorder. Among the patients with an ORL somatic diagnosis (N = 60), 15 (29.4%) were diagnosed with an anxiety disorder and 16 (31.4%) with an undifferentiated somatoform disorder (Table VI).Then Table VII gives the frequency distribution of the received psychiatric treatment (selective serotonin reuptake inhibitors, psychotherapy, etc.).

Some observations included in Tables II, V, VI, and VII had to be scored as missing values because of the unclear or incomplete reporting of data in the patients' medical files.

TABLE VI.
Frequency Distribution of Psychiatric Diagnoses in the Study Population (N = 102) and According to the Presence or Absence of an ORL Diagnosis.

	ORL Diagnosis		
Psychiatric Diagnosis	Yes (N = 60) N (%)	No (N = 42) N (%)	Total N = 102 N (%)
Anxiety disorder	15 (29.4)	16 (43.2)	31 (35.2)
Undifferentiated somatoform disorder	16 (31.4)	4 (10.8)	20 (22.7)
Depressive disorder	11 (21.6)	9 (24.3)	20 (22.7)
No psychiatric diagnosis	4 (7.8)	4 (10.8)	8 (9.1)
Adaptation disorder	3 (5.9)	1 (2.7)	4 (4.5)
Grief bereavement	0 (0.0)	1 (2.7)	1 (1.1)
PTSD	0 (0.0)	1 (2.7)	1 (1.1)
Mild cognitive impairment	0 (0.0)	1 (2.7)	1 (1.1)
Eating disorder	1 (2.0)	0 (0.0)	1 (1.1)
Bipolar disorder	1 (2.0)	0 (0.0)	1 (1.1)
Missing values	9 (15.0)	5 (12.0)	14 (13.7)

ORL = otorhinolaryngological; PTSD = posttraumatic stress disorder.

TABLE VII.
Frequency Distribution of Psychiatric Treatment in the Study Population (N = 102).

Variable Psychiatric Treatment	N (%)
Psychotherapy	38 (42.7)
Psychotropic drugs	27 (30.3)
No treatment	14 (15.7)
Psychotropic drugs and psychotherapy	6 (6.7)
Outpatient follow-up (psychiatry)	4 (4.4)
Missing values	13 (12.8)

DISCUSSION

To our knowledge, this is the first study investigating MUORLS at an integrated ORL-psychiatry outpatient setting of a university medical center. MUORLS has become a topic of considerable interest, given the growing population of these patients and the increasing concern about quality of life, health care costs, risk of iatrogenic damage, and health care trajectories that are unsatisfactory to both the patients and their physicians.[3–6,13,14] An important outcome of this study is insight into the existence of this patient population and the detour that they take to obtain appropriate treatment in daily clinical ORL practice. Among their medically unexplained physical symptoms, our patient cohort had a high prevalence of psychiatric comorbidity.[3,15] Ultimately, this investigation may inform efforts to develop an integrated interdisciplinary treatment plan and thus decrease the risks and medical costs of MUORLS. Quite often, a diagnosis of MUORLS is made by exclusion. Uncertainty as to the cause of the symptoms can make physicians uneasy; they weigh the need to rule out serious illness and increasing chronicity against the cost, distress, and damage of extensive clinical testing.[16,17] It may be the fear of missing a "serious diagnosis" that underlies physicians' emphasis on the physical side of the symptoms. Queries about psychological distress are therefore subordinated to an examination of physical aspects or even forgotten during consultations.[5,16] The present study revealed that the majority of the patients suffering from MUORLS were diagnosed with a psychiatric disorder (N = 80, 78%). A final psychiatric diagnosis was often delayed by requiring additional (instrumental) examinations to exclude a somatic disorder or serious illness. Some of the patients visited the ORL outpatient clinic many times (up to 92) or received care in many different disciplines for diverse medical complaints, thereby raising both the costs of health care and the risk to the patient. Thirty-two percent of the patients had received some ORL treatment (N = 32) without improvement of complaints before they visited our two ORL experts. Seventy-eight percent (N = 80) of the study population was diagnosed with a psychiatric morbidity/comorbidity. However, the determination of a psychiatric diagnosis in MUORLS patients with an established somatic ORL diagnosis should not be disregarded (N = 47; 92%). The presence of a somatic ORL diagnosis has often delayed referral to the integrated ORL-psychiatry care setting. Among MUORLS patients

without a somatic ORL diagnosis, 90% (N = 38) were diagnosed with a psychiatric comorbidity. Given the underdetection of psychiatric morbidity along a nonintegrated trajectory, evidence-based treatment was implemented right from the start of our multidisciplinary outpatient clinic approach.[2] Thus, in patients with expected multimorbidity, screening for psychiatric morbidity makes sense.[18] Consequently, an integrated approach is deemed necessary because it gets patients motivated for and referred to psychosomatic care. Eventually, structured clinical diagnostics may lead to evidence-based treatment for psychiatric morbidity/comorbidity.

Limitations of the Study

This prospective investigation has some methodological limitations. Although the study yielded some interesting preliminary data, the study population is too small to reveal significant group differences. The heterogeneous etiology of MUORLS and the small number of patients per complaint or somatic diagnostic group prevented the comparison of groups for significant differences. Furthermore, selection bias may have occurred due to patients' fear of stigmatization or other patient-related reasons (e.g., only willing patients were included; patients were referred to a tertiary university medical center), so it is impossible to generalize. Still, the enrollment reflected the theoretical population of patients with MUORLS who consult the otorhinolaryngologist for diagnosis and treatment at the university medical center. One potential drawback is the absence of controls, although finding and including patients with similar somatic ORL diagnosis without MUORLS would have introduced selection bias as well. Furthermore, although the study design was prospective, the search for patient data in the medical files may have been incomplete. It is possible that some information was missed despite extensive and careful searching, and patients may have visited other hospitals for the same complaints without reporting it. This may have led to an underestimation of the results in the current study; an overestimation is very unlikely. Finally, patients suffering from a known psychiatric disorder were excluded. Their inclusion would have led to a higher frequency of MUORLS. On the other hand, inclusion of patients treated with antidepressant and/or anxiolytic drugs would have led to lower frequencies of MUORLS and the underestimation of its presence.

CONCLUSION

Findings from the present cohort study suggest that the majority of patients with MUORLS suffer from under- or undiagnosed psychiatric morbidity. Patients suffering from MUORLS deserve easy access to integrated interdisciplinary care (ORL and psychiatry), followed by detailed psycho-education about the pathogenesis of their complaints and the future psychosomatic approach. Further research should focus on the development of effective methods to ensure that patients with MUORLS will be identified and treated (in a multidisciplinary approach) accordingly.

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