

*Research Article***Psychological Distress in Patients with Minimal Associated Pathological Lesions**

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**Abstract**

**Background and objective:** Voice disorders and mental health are closely connected. Several studies suggest that dysphonia, defined as an altered quality of voice, is often accompanied by symptoms of psychological distress. Psychogenic causes and an increased tension of the intrinsic and extrinsic laryngeal muscles, in response to psychological conflict, anxiety, depression or inhibited psychoemotional expression, are presumed to be one end of the spectrum of possible factors leading to the development of minimal associated pathological lesions **Subjects and methods:** The current study included 100 subjects. Fifty subjects had change of voice and diagnosed as minimal associated pathological lesions, and fifty subjects served as the control group. We use Symptom Chick List 90 Revised to assess different psychological correlates of voice disorders. **Results:** the psychological condition may affect voice disorders either as a cause or as a result with statistical significant differences between the study group and control group as regard of the level of depression, somatization and hostility  $P < 0.005$ . **Conclusion:** The psychological condition of patients with minimal associated pathological lesions disorders can be described as somewhat, anxious, shying away from conflict and over-respecting social norms, with emotional adjustment problems and difficulty in self-assertion and expressing of feelings. It appears that individuals with these traits seem to be especially susceptible to minimal associated pathological lesions, rather than that changes of personality are a consequence of a voice disorders

**Key words:** personality and psychological problems, Non-Organic Voice Disorders

**Introduction**

Voice disorders and mental health are closely connected. Several studies suggest that dysphonia, defined as an altered quality of voice, is often accompanied by symptoms of psychological distress<sup>[1]</sup>. Psychogenic causes and an increased tension of the intrinsic and extrinsic laryngeal muscles, in response to psychological conflict, anxiety, depression or inhibited psychoemotional expression, are presumed to be one end of the spectrum of possible factors leading to the development of functional voice problems<sup>[2]</sup>. In addition, advanced laryngeal disorders such as laryngeal cancer and recurrent papillomatosis cause psychological distress, resulting in the formation of a vicious cycle<sup>[3]</sup>. Dysphonic patients frequently report symptoms of psychological distress

such as anxiety and depression<sup>[4]</sup>. Increased state and trait anxiety is one of the most frequently mentioned features of patients with nonorganic dysphonia and vocal fold (VF) nodules<sup>[5]</sup>. Despite overall interest in this field, only a few studies have been conducted to assess differences in the current state of psychological distress among various laryngeal diseases<sup>[6]</sup>. A recent study conducted by Dietrich et al.<sup>[6]</sup> is the only report to date that comprehensively investigated the frequency of anxiety and depression using the Hospital Anxiety and Depression Scale (HADS) for patients with common voice disorders with respect to diagnosis and gender. The data are consistent with suggestions that anxiety and depression may be common among some patients with muscle tension dysphonia, paradoxical VF movement

disorder and benign VF lesions and that this distress may be more common for women than for men. However, individual variability in the data set was large, and no specific role of these mental health issues for the assessed voice disorders was stated. On the whole, the assessment of psychological distress is an important issue, but a major segment of the studies on the frequency of psychological distress among patients with voice disorders is devoted to selected patient groups, e.g. patients with nonorganic dysphonia, while the data on psychological distress in patients with benign VF lesions and tumors or chronic inflammation are sparse and insufficient<sup>[7]</sup>. Further investigations on how psychological traits may distribute across various voice disorders and across genders in a large sample could add more information on the prevalence of psychological distress among dysphonic patients with a wider spectrum of voice disorders and could lead to better treatment options for selected patients.

### Patients and Methods

The current study included 100 subjects. Fifty subjects had change of voice and diagnosed as minimal associated pathological lesions, and fifty subjects served as the control group.

**Group of minimal associated pathological lesions:** patients had mean age of  $33.32 \pm 37.86$  and age range between 13 and 78 years old. They had change of voice and was not suffering from any previous psychological disorders. These patients were selected randomly from outpatient clinic of Phoniatics, Minia University Hospital, in the period from May 2014 to November 2016.

**The control group** included 50 subjects with their age and sex distribution matched with the study group. The subject is not suffering either from change of voice or previously diagnosed with psychological disorder. They were selected randomly from outpatient clinic of Internal medicine, Minia University Hospital.

### Methods

Each individual of both groups was subjected to the following protocols of assessment:-

[A]- The full voice evaluation protocol in the Phoniatic Unit, Minia University Hospital<sup>[8]</sup> which includes:

#### **I- Elementary Diagnostic Procedures:**

**i) Patient Interview:** This includes personal data of the patient (name, age, sex, residence, marital status, number of children, and their ages, education and occupation). Then analysis of the patient's complaint as regards the onset, course and duration followed by asking about the phonasthenic symptoms. Predisposing factors for voice disorders are evaluated by asking about: Type of job, excessive use of voice, temperament, emotional stress, smoking, spirits, repeated upper respiratory tract infection and its frequency, allergic tendencies, hyperacidity, reflux, medicaments, surgical interference and trauma.

**ii) Auditory Perceptual Assessment (APA):** After careful listening to the patient's voice, the grade of dysphonia, character of voice, pitch changes, loudness, glottal attack and affection of associated laryngeal functions could be determined using the modified GRBAS scale<sup>[9]</sup>

#### **II- Clinical Diagnostic Aids:**

Full Laryngeal examination including telescopic laryngeal evaluation.

All patients in the study underwent Telescopic rigid fibero laryngoscopy in the phoniatic department at Minia University using rigid fiberoptic laryngoscope Henke-Sass Wolf angle 90.

[B]- **Symptom checklist 90-Revised:**<sup>[10]</sup> A brief multidimensional self-report inventory that screens for nine symptoms of psychopathology and provides three global distress indicators.

The SCL-90-R provides an overview of symptom severity and intensity The Arabic of SCL90-R was prepared by El-Behairy<sup>[11]</sup>. It underwent a series of reliability testing and is standardized for Arabic culture. The

items included in this questionnaire are Somatization, Obsessive-compulsive, Interpersonal sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation

1- Somatization: Multiple complaints including physical symptoms which can not be explained by detected physical disorder.

2- Obsessive Compulsive Disorder: means an idea and compulsion means act. Both share the following features: Originating from the patient's mind, repetitive, cannot be resisted and causing distress to the patient.

3- Interpersonal Sensitivity: The patient is very sensitive and feels inferiority.

4- Depression: The patient feels blue, hopeless with depressed mood and lack of interest for at least a period of 2 weeks.

5- Anxiety: There must have been period of at least 6 month with prominent tension and apprehension about every day events.

6- Hostility: Aggression either in thoughts feelings or acts.

7- Phobic Anxiety: Either agoraphobia (fear of public places), social phobia and specific phobia.

8- Paranoid Ideation: Suspicion of others.

**Results**

**I- Demographic data and history:**

The control group consisted of 50 subjects. There were 21 males (42%) and 29 (58%) females .Age of the control group ranged from 16 years to 51 years; average was 28.2 years and SD was 7.27 years. The study group consisted of 50 patients. There were 26 males (52%) and 24 (48%) females. Age

of study group ranged from 13 years to 78 years, average was 33.2 years and SD was 37.86 years.

**II- Laryngoscopic examination:**

Laryngeal examination of the study group that was suffering from change of voice revealed 12(24%) of them had vocal folds nodules, 22(44%) had vocal fold polyps, 8(16%) had vocal folds Reinke's edema, 7(14%) had vocal fold cysts and 1(2%) had vocal fold contact granuloma.

**III- Symptom checklist 90-Revised:**

- In the study group, 42(84%) had high level of somatization. *Independent sample t test for quantitative data between the two groups* revealed a significant difference between control group,who 16(32%) of them had high level of somatization and as regard of the level of depression revealed statistical significant difference between the study group and control group, In the study group 7(14%) of patient had high level of depression. In the control group 2(4%) of individuals had high level of depression

- Also, As regard of the level of hostility, *Independent sample t test for quantitative data between the two groups* revealed statistical significant difference was obtained between the study group and the control group, In the study group 9(18%) of patients had high level of hostility while, In the control group 1(2%) of individuals had high level of hostility. on the other hand, Non statistical significant difference was obtained as regard of the other psychiatric items as shown in table 1.

**Table (1): comparison between the study group and the control group as regard items of Symptom Chick List-90 Revised**

Revised checklist questionnaire	Study goup (n=50)	Control group (n=50)	P value
Somatization	22(44%)	7(14%)	<b>0.034*</b>
Obsessive compulsive	14(28%)	3(6%)	0.121
Interpersonal sensitivity	12(24%)	5(10%)	0.727
Depression	6(12%)	2(4%)	<b>0.012*</b>
Anxiety	9(18%)	2(4%)	0.056
Hostility	12(24%)	1(2%)	<b>0.016*</b>
Phobic anxiety	13(26%)	1(2%)	0.112
Paranoid	10(20%)	1(2%)	0.112

\*: *Independent sample t test for quantitative data between the two groups*

\*: *significant difference at p value < 0.05*

## Discussion

The primary aim of this study was to investigate the frequency of anxiety and depression in patients with a wide spectrum of benign voice disorders compared to healthy voice controls using a standardized approach. The results of the current study showed that the prevalence of psychological morbidity in patients with benign voice disorders based on SCL-90 R. In the study group, 42(84%) had high level of somatization, while in control group, 16(32%) of the individuals had high level of somatization this can be explained by the hypothesis theory of the somatization disorder which is emotional in origin, beyond a certain level of stress, physical symptoms appear. Also. There were significant differences between the study group and the control group as regard, the level of depression 7(4%) for patients had high level of depression, mostly these patients are seen that have self concept centers on believes on adequacy, worthlessness and low self esteem

Also 9(18%) for the patients had high level of hostility in comparison to 2(2%) for the control group. This result may be explained by patients in our study were noticed to be easily nervous, have high levels of negative affect, unable to inhibit or control their emotional reactions and experience negative affect in the face of very minor stressors, Guilt Feelings, Low self-esteem, Moody, and obsessive. Ultimately, results from our study may have both clinical and research implications. The data indicates that psychological correlates may be individual factors in some conditions affecting voice and individual patients may be affected differentially. Thus, there may be merit in addressing them at various points during the treatment process as potentially: (1) (co-)causal, (2) precipitating, (3) exacerbating, or (4) maintaining for the conditions. So, attempts to break the potential vicious cycle of the psychological background in voice disorders in susceptible individuals become a foremost goal. Our results agreed with Kotby et al.,<sup>[12]</sup> who study of 100 patients of non-organic voice disorders they found the

presence of stressful life event preceding the onset of voice disorders in 66% of the patients, somatization in 53% of patients, anxiety in 47% of patients, 36% hysteria, 49% hypochondriasis, 9% mild depression and 5% moderate depression.

Roy et al.,<sup>[13]</sup> reported that, it is uncertain whether personality and psychological problems contribute to particular voice disorder, or that voice disorder creates psychological problems and personality effects. As well as Milutinovic<sup>[14]</sup> reported that psychological behavior, emotions, voice and speech are closely interrelated, thus voice disorders in this respect may be of psychogenic background. He reported that almost all voice disorders can have a psychological element, whether as a cause or as a result.

## Conclusion

The psychiatric traits of patients with minimal associated pathological lesions can be described as somewhat, anxious, shying away from conflict and over-respecting social norms, with emotional adjustment problems and difficulty in self-assertion and expressing of feelings. It appears that individuals with these traits seem to be especially susceptible to non-organic voice disorders, rather than that changes of personality are a consequence of a voice disorders.

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