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Psychiatry

A STUDY ON CORRELATION OF THE QUALITY OF LIFE IN DEPRESSIVE DISORDER EITHER ASSOCIATED WITH OR WITHOUT THYROID DYSFUNCTION

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ABSTRACT

Introduction: Depression is one of the leading causes of disease worldwide. Depression is associated with significant impairment in work and daily social and psychological well-being. The relation between thyroid function and depression has long been recognized. Patients with thyroid disorders are more prone to develop depressive symptoms and conversely depression may be accompanied by various subtle thyroid abnormalities.

Materials and method: The study was carried out on patients registered in psychiatry clinic at tertiary neuropsychiatry center suffering from depressive disorder as per the ICD-10(DCR). Severity of depression will be rated using HAM-D. Thyroid profile of those patients who gave consent was done in laboratory of neurochemistry department. The WHOQOL-BREF item scale was used to study the quality of life. The World Health Organization Quality of Life Brief Scale Contains 26 items, which constitutes 4 domains-physical health, psychological health, social relationship and environment.

Results and conclusion: Patients with higher HDRS scores on depression have poorer Quality of Life in the Physical, Psychological, Social Relationship, and Environmental domains of WHO-QOL BREF. The Quality of Life has been found to be more compromised in patients of depressive disorder with hypothyroidism, as compared to patients of depressive disorder without hypothyroidism.

KEYWORDS : ICD-10(DCR), QoL, Thyroid dysfunction

INTRUDUCTION

Depression is one of the leading causes of disease worldwide. Depression is not only a common, often chronic, and recurrent disorder, but it is cardinally associated with significant impairment in work and daily social and psychological well-being (1). Historically conceived as either a disease of the mind or of the brain, treatment options followed this aetiology. Current diagnostic assessment of depression is based on descriptions of symptoms, their presence and magnitude over time. The World Health Organisations` (WHO) International Classification (2) for Diseases and Related Disorders (ICD-10) describes the criteria for a depressive episode, where at least four items, such as loss of interest in activities, lack of emotional reactions, sleep disturbance, loss of appetite, motor retardation, weight loss, loss of libido, and decreased energy are present for a duration of two weeks (World Health Organization).

Epidemiological studies demonstrate that depressive disorders are highly prevalent: displaying high rates of lifetime incidence, early age onset, high chronicity, and role impairment. In the year 2000, it was the fourth leading cause of disease burden worldwide; and it is projected to be the second leading cause of disease burden for both men and women across age groups by the year 2020 (3, 4). Various studies have deepened our understanding of the course of depression; remission, recovery, relapse and recurrence. A key variable influencing rates of recovery, relapse, and recurrence is the presence of medical or psychiatric comorbid illnesses. Among medical co-morbid illness, thyroid abnormalities are very common. Both excess and insufficient thyroid hormones can cause mood abnormalities including depression that is generally reversible with adequate thyroid treatment (5). Depressive symptoms are frequently an early or first manifestation of thyroid disease (6). Hypothyroidism can produce signs and symptoms of depression and can co-exist as a secondary illness in depressed patients (6). Subclinical hypothyroidism may lower the threshold for occurrence of depression (7).

It has been found that depressive illness is associated with several functional disturbances and impairment of several aspects of QoL that reflect patient's health status and treatment efficacy (8). The relation of quality of life and depression are strongly linked together as indicated by many researches in this field. Studies have shown that depressive disorders lead to significant dysfunction (9), disability (10) and poor quality of life in sufferers (11).

It has been also found that patients with both overt and subclinical hypothyroid disease (SCH) may have symptoms that could lead to impairment in quality of life (qol) and health status of an individual (12). It is therefore important to assess QoL and symptoms in patients with hypothyroidism and depressive disorder to help in assessing its appropriate management.

QUALITY OF LIFE IN DEPRESSION

Quality of life as a dynamically changing situation affects the complex of clinical, social and personal factors. Quality of life is viewed as multidimensional quantity. World Health Organization (WHO) in it's questionnaire intended to assess the quality of life is presented as a major social, physical, psychological, and environmental domain. Quality of life becomes one of the objective indicators of successful therapeutic interventions in psychiatry. Current trends in the evaluation of mental health care characterizes a division from a focus on disease to an emphasis on patient from extending life to improving his quality from objective to subjective variables, such as the category of quality of life. Individual level of quality of life can be affected only by an individual approach, which is the result of a process of introspection, which examines and evaluates the individual's own ideas and aspirations, the extent of their implementation with the implementation rate of the rest of society.

Depressive illness is associated with several functional disturbances and impairment of several aspects of QoL that reflect patient's health status and treatment efficacy (8). The relation of quality of life and depression are strongly linked together as indicated by many researches in this field. Studies have shown that depressive disorders lead to significant dysfunction (9), disability (10) and poor quality of life in sufferers (11). According to the 1990 Global Burden of Disease of the World Health Organisation (WHO) (13), depression has a greater negative impact on the quality of life of the patient than cardiovascular disease and has been projected to be the second most important cause of disability, as disability adjusted years, by 2020 (14). Studies have shown that better QoL may be facilitated by lower depression level, positive social support, and better medical professional–patient interaction among depressive patients (15,16).

Disability in key occupational, domestic and social roles is strongly related to both the severity and persistence of the disorder (17). Statistically significant relationship was also confirmed by research examining quality of life in patients with depression in primary care.

QUALITY OF LIFE IN THYROID DISORDERS

Patients with both overt and subclinical hypothyroid disease (SCH) may have symptoms that could lead to impairment in quality of life (qol) and health status of an individual (12). There are reports as well as systematic research evidence that not everyone is satisfied with treatment due to persisting symptoms (18). It is therefore important to assess QoL and symptoms in patients with hypothyroidism to help in assessing its appropriate management (12, 19).

Objectives of the study: To study the correlation of the Quality of life in depressive disorder either associated with or without thyroid dysfunction.

Materials and methods

Universe of the study were patients of first episode depressive disorder and recurrent depressive disorder attending the outpatient services of neuropsychiatric hospitals. The study is cross sectional involving the patients attending OPD of tertiary neuropsychiatry centre, who had been diagnosed with first episode depressive disorder and recurrent depressive disorder .Total number of 100 patients suffering from depressive disorders either first episode depressive disorder or recurrent depressive disorder were studied. So a total sample size of 100 patients were studied. Sample size was calculated on the basis of practical aspect. Sampling method is through systematic random sampling.

INCLUSION CRITERIA

1. Patient fulfilling the criteria for first episode depressive disorder and recurrent depressive disorder as per ICD-10(DCR).
2. Patient in age range from 18-60 years.
3. Patients of either gender.
4. Patients providing informed consent.

EXCLUSION CRITERIA

1. Patients with other co-morbid psychiatric illness (except nicotine & caffeine use disorder).
2. Patients with severe depressive episode with psychotic features or suicidal attempts.
3. Patients with chronic debilitating physical illnesses which might have impaired assessment.

METHODOLOGY OF STUDY

Detailed clinical assessment was done of the patient registered in psychiatry clinic at tertiary neuropsychiatry center suffering from depressive disorder. After making diagnosis of first episode depressive disorder and recurrent depressive disorder clinically as per the ICD-10(DCR).Then after applying inclusion and exclusion criteria and explaining the purpose of study, those patients who give consent were included. Severity of depression was rated using HAM-D. Thyroid profile of those patients who gave consent was done in laboratory of neurochemistry department. Thyroid function test including fT3, fT4, TSH of every patient fulfilling the criteria for first episode depressive disorder and recurrent depressive disorder. (20) The WHOQOL-BREF item scale will be used to study the quality of life. The World Health Organization Quality of Life Brief Scale Contains 26 items, which constitutes 4 domains-physical health, psychological health, social relationship and environment. The 26 items of WHOQOL BREF were extracted from 100 items of WHOQOL100 after validation and reliability studies and the scale is comparable across cultures.

Results of the study

Table 1- Correlation among Thyroid Abnormalities (Both Subclinical and Clinical Hypothyroidism), Quality of Life and Depressive Disorder

Variable	Suclinical Hypothyroidism	Clinical Hypothyroidism	Total	P-value
	Mean±S.D	Mean±S.D.	Mean±S.D.	
HDRS	22.8696±9.08197	26.33±7.691	18.97±8.1581	**<0.001**
Domain1 of QoL	14.8261±2.691	14.33±2.146	15.92±3.08	**.009**
Domain2 of QoL	14.609±2.95	13.427±2.68	15.92±3.0869	**<0.001**
Domain3 of QoL	9.913±2.64	8.917±2.575	10.23±2.44	0.071
Domain4 of QoL	22.913±3.044	21.83±2.98	23.59±2.46	**0.003**
Total Z Score	4.174±1.114	8.25±1.288	2.74±2.6194	**<0.001**

*One way ANOVA **. The mean difference is significant at the 0.05 level.

In **Table 1** HDRS score has been significantly associated with clinical hypothyroidism with P-value < 0.001. Domain 1, 2 and 4 of WHO-QOL BREF has been significantly associated with thyroid dysfunction with p-value <0.001.

Total Z score was found to be significantly associated with clinical hypothyroidism in comparison to subclinical hypothyroidism with P-value<0.001.

Table 2- Correlation of Quality of Life in Depressive Disorder Associated with or without Thyroid Dysfunction

N=100(depressive disorder)

Variable	Euthyroid (n=65)	Hypothyroid (n=35)	P-value
Domain1 of QOL	16.600±3.171	14.657±2.496	**.002**
Domain2 of QOL	16.846±2.802	14.200±2.878	**.000**
Domain3 of QOL	10.585±2.270	9.5714±2.627	**.047**
Domain4 of QOL	24.154±1.898	22.543±3.023	**.001**

*Independent t-test **p-value<0.05

In **Table 2** Domain 1,2,3 and 4 of WHO-QOL BREF has been found to be significantly associated with depressive disorder with hypothyroidism in comparison to depressive disorder alone. There is a significant difference with p-value<0.05.

Discussion of the findings

Patients across the groups with first episode Depression and recurrent depressive disorder were correlated in terms of quality of life and thyroid abnormalities.

In present study the mean score on depression scale (HDRS) in the subjects with clinical hypothyroidism was higher when compared to subclinical hypothyroidism with p-value<0.001(table-1). This suggests that the severity of depressive episode is associated more with clinical hypothyroidism than subclinical hypothyroidism.

Despite an extensive search done, enough studies on correlation of quality of life in depressive disorder associated with thyroid dysfunction could not be found. However, in this sample of population, it was found that there a significant correlation between the quality of life in depressive disorder associated with thyroid abnormalities.

In present study it was found that Domain 1, 2,3, & 4 of WHO-QOL BREF has been found to be significantly associated with depressive disorder with hypothyroidism in comparison to depressive disorder alone with P-vlaue<0.05 in all the 4 domains of WHO-QOL BREF (table.2). This suggest that depressive disorder co-morbid with thyroid abnormalities has significant impact on physical, psychological , social relationships and environmental domain of quality of life in comparison to depressive disorder alone(21) .This can be explained on the basis of similar clinical experience due to thyroid abnormalities and depressive disorder in terms of psychological and physical symptoms, which may have dual burden on quality of life of an individual.

Conclusion

The Quality of Life has been found to be more compromised in patients of depressive disorder with hypothyroidism, as compared to patients of depressive disorder without hypothyroidism. Various domains of WHO-QOL BREF i.e, Physical, Psychological, Social relationship, and Environmental domains respectively were found to be significantly correlated with the severity of depression. Patients with higher HDRS scores on depression have poorer Quality of Life in the Physical, Psychological, Social Relationship, and Environmental domains of WHO-QOL BREF.

Limitations

However there were few shortcomings in this study. It was a clinic-based study done in a tertiary neuropsychiatry hospital so findings of the study cannot be generalized to whole population unless repeated in the community. This study employed a cross sectional design with retrospective collection of information which could have produced a possible source of recall bias. Therefore, subjective measures relying on memory have potential problems of accuracy and also chances of being under or over-estimated.

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