

A Study of Assessment and Characterization of Symptoms and Quality of Life in Post Covid Patients

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Abstracts: ***Objective:** To assess characteristics and clinical features in patients recovered from COVID - 19 infection and its effect on quality of life. **Methods:** Total 60 patients who have recovered from covid pneumonia were enrolled after one month of COVID - 19 infection. These patients were assessed for symptoms like dyspnoea, weakness, cough, fever and others. Quality of life was analysed on the basis of WHOQOL score and symptom assessment was done by SGRQ score. **Results:** There was a better correlation of dyspnoea with SGRQ total score as well as SGRQ symptom score in post covid patients while cough and weakness does not correlate with SGRQ total score and SGRQ symptom score. WHO score total as well as physical, psychological, social and environmental was not correlated with any of the symptoms. Grading of SGRQ symptom score and total score both at less than 10, 10 to 25, 25 to 50 and more than 50 was correlated with dyspnoea. **Conclusion:** Post covid patients can also be evaluated by SGRQ symptom score only. WHOQOL is not helpful in evaluation of post covid patients.*

Keywords: COVID 19, Post Covid, SGRQ score, WHOQOL score, symptoms

1. Introduction

Coronavirus disease 2019 (COVID - 19) is a contagious respiratory and vascular disease causing severe acute respiratory syndrome. Common symptoms of COVID - 19 include fever, cough, fatigue, breathing difficulties, and loss of smell and taste. Symptoms begin one to fourteen days after exposure to the virus. It is anticipated that COVID - 19 may have a major impact on physical, cognitive, mental and social health status, also in patients with mild disease presentation. In the coming weeks and months, emphasis will gradually involve post - acute care of COVID - 19 survivors. Previous outbreaks of corona viruses have been associated with persistent pulmonary function impairment, weakness, pain, fatigue, depression, anxiety, and reduced quality of life to various degrees. Since the start of the Corona virus pandemic relatively little attention has been paid to the health - related quality of life (HRQoL) of patients with COVID - 19 following discharge from hospital. Discharged COVID - 19 patients who had severe disease (characterized by moderate to severe pneumonia) may experience ongoing/ recurrent symptoms (including dyspnoea, cough, asthenia, fatigue) [1, 2], persistent impairment of lung function and exercise capacity [3], and psychological or psychosocial problems, which could impact their daily functioning and HRQoL in both the short and long - term [4]. Dyspnoea is the only symptom predictive of severe COVID - 19 and intensive care unit (ICU) admission [5]. After hospital discharge, patients with severe COVID - 19 may continue to experience dyspnoea both at rest and during exercise or daily activities. To aid recovery/rehabilitation, it is important to assess how much breathlessness impacts a patient's functioning and HRQoL and implement appropriate treatment.

Aim and Objective

The aim of this real - life study was to assess symptoms (especially dyspnoea) and quality of life of COVID - 19

patients after 1 month of covid positive report using SGRQ score and WHOQOL score.

2. Material and Methods

A Prospective observational study was carried out on 60 cases of Post Covid patients who presented in the Department of Respiratory Medicine, GMERS Medical College and Hospital, Gotri, Gujarat in the months December to June 2021. Patient's demographic data and clinical features were recorded after 1 month of covid positive report.

2 questionnaires were completed by participants 1) the St George's Respiratory Questionnaire (SGRQ) 2) WHO quality of life questionnaire. The SGRQ is a pulmonary - specific HRQoL questionnaire that is divided into three domains measuring symptoms, activity limitation, and the social and emotional impact of disease. Patients consider the last 30 days when rating these domains. The score range for each domain and the total score is from 0 (no impairment/ no effect on quality of life) to 100 (maximum impairment/ maximum perceived distress); thus, a higher score represents greater impairment or a poorer HRQoL. WHO quality of life questionnaire is divided into 4 domains i. e. physical, environmental, social, psychological. It consists of 30 questions and each domain is scored out of 100.

Inclusion criteria: Patients aged more than 18 years who were previously confirmed covid positive by rapid antigen and/or RTPCR swab test, completed one month after positive test and those who were willing to participate and give consent were included in the study.

Exclusion criteria: Patients suffering from malignancy, HIV - AIDS and other chronic conditions were excluded from the study.

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3. Results

The data for both SGRQ and WHOQOL are presented as mean \pm standard deviation (SD) or n (%). Paired t - tests were used to compare scores between patients having symptoms and those who were asymptomatic having scores in same range. For all test, P value $<$ 0.05 was considered statically significant.

- SGRQ total score was significant for dyspnoea & weakness in score range of 10 - 25 ('p' value - 0.006 & 0.02 respectively) and for dyspnoea in score range of 25 - 50 ('p' value - 0.018).
- For SGRQ symptom score was significant for cough in score range of 10 - 25 ('p' value - 0.00047). Also, for dyspnoea it is significant in score range 10 - 25 and 25 - 50 ('p' value - 0.02 & 0.01 respectively), this further proves that dyspnoea is a prominent symptom in post covid patients.
- There was a better correlation of dyspnoea with SGRQ total score as well as SGRQ symptom score in post covid patients. Grading of SGRQ symptom score and total score both at less than 10, 10 to 25, 25 to 50 and more than 50 was correlated with dyspnoea.
- WHOQOL total score as well as physical, social and environmental was not correlated with any of the symptoms. Only WHO psychological score was correlated with weakness in score range of 50 - 75 and 75 - 100 ('p' value - 0.01 & 0.03 respectively).

4. Discussion

Changes in quality of life and dyspnoea after hospitalization in COVID - 19 patients discharged at home (2020) (Pierachille Santus et al, 2020) shows that there was a significant reduction in SGRQ total score in each of the three domain scores (symptoms, activity and impact). The mean (SD) SGRQ total score decreased from 25.5 (15.5) at T0 to 16.9 (13.2) at T1 ($p < 0.01$); 65% of patients achieved a clinically important change of ≥ 4 points. SGRQ domain scores (symptoms, activity, and impact) were also significantly reduced (all $p < 0.01$). In the present study SGRQ total and symptom score was correlated with dyspnoea.

Comparison of residual pulmonary abnormalities 3 months after discharge in patients who recovered from COVID 19 of different severity (June 2021) (Mei Zhou et al, 2021) shows that SGRQ score increases with increase in severity of disease. In present study also dyspnoea is present in most patients as the score increases and cough and weakness is present even in less symptomatic patients.

Applying the WHO ICF Framework to the Outcome Measures Used in the Evaluation of Long - Term Clinical Outcomes in Coronavirus Outbreaks (1 sept 2020) (kajal patel et al, 2020) shows that quality of life is reduced in post covid patients. In present study, patients having weakness were found to be having decrease quality of life because of blue mood, anxiety, despair and depression.

5. Conclusion

On the basis of SGRQ total and symptom score, dyspnoea is a present in majority of post covid patients, followed by weakness and cough. Also, dyspnoea is present in most of the patients as the score increases and cough and weakness is present even in less symptomatic patients. Post covid patients can also be evaluated by SGRQ symptom score only.

WHOQOL is not helpful in evaluation of post covid patients. On the basis of WHOQOL score it can be concluded that in patients having weakness as a symptom, there is increase in negative symptoms such as blue mood, despair, anxiety and depression.

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