RESEARCH ARTICLE

## Assessing Well-being in Patients Diagnosed with Gallbladder Carcinoma

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**ABSTRACT**

**Background:** Gallbladder carcinoma, a rare and aggressive form of cancer, poses significant challenges to patients' well-being. Physical well-being in gallbladder carcinoma patients is frequently compromised by symptoms such as pain, nausea, and weight loss, with significant implications for functional status and nutritional health. Psychological distress, including anxiety and depression, is prevalent, highlighting the need for routine mental health screening and support. Quality of life assessments using tools like EQ-5D and FACT-G reveal that comprehensive symptom management and early palliative care involvement are crucial for improving overall well-being. Cognitive decline related to cancer treatments was also noted, emphasizing the need for regular cognitive assessments. Additionally, addressing spiritual and existential needs through targeted support and counseling was found to enhance patient satisfaction and coping. Personalized care plans, tailored to individual patient needs and preferences, have been shown to significantly improve quality of life. This study assesses the multidimensional aspects of well-being in patients diagnosed with gallbladder carcinoma, including physical, emotional, psychological, and social dimensions.

**Aim:** The aim of studying the quality of life (QoL) in patients with carcinoma of the gallbladder is to understand and improve the overall well-being of individuals affected by this challenging disease.

**Material and Method**: This cross-sectional study was conducted in the department of Department of General Surgery and Surgical Oncology. The study was conducted among patients with histologically proven cases of the carcinoma of the gallbladder. The study and questionnaire were explained to all the participants. While collecting the data the questions were read to the participants and the answers were recorded. Question related to the variables were answered using a five–point scale 1 to 5. After the patient understands has been confirmed, he/ she was encouraged to complete every item in order without skipping any. The patients were interviewed at the time of admission preoperatively or before treatment and postoperatively or after treatment at the intervals of 1-3-6- 9 months.

**Results:** At the three-month mark of treatment, factors such as socioeconomic status, gender, education, diet, and area of living were significantly associated with quality of life (QOL). Patients who underwent surgery reported better QOL compared to those who received chemotherapy and adjuvant therapy at one, three, and six months of treatment. At three months, QOL was also better for patients receiving adjuvant therapy compared to those receiving only chemotherapy. Chemotherapy negatively impacted the QOL of patients with Gallbladder Carcinoma, particularly affecting physical well-being (PWB), social well-being (SWB), and emotional well-being (EWB) at the three-month stage. However, no significant differences between the groups were observed at later stages.

**Conclusion:** Assessing well-being in patients diagnosed with gallbladder carcinoma is a multifaceted and crucial aspect of their care. Given the aggressive nature of the disease and the impact of treatments, a thorough evaluation encompasses physical, emotional, and psychosocial dimensions. Psychological and behavioral interventions that could enable the carcinoma of the gallbladder patient to cope better are independent and well informed about the treatment which might improve quality of life in remaining years.

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**Keywords**: Gallbladder Carcinoma (CaGB), Physical Well-being (PWB), Emotional Well-being (EWB), Surgical Intervention, Chemotherapy, Socioeconomic Factors, Education.

**INTRODUCTION:**

Gallbladder carcinoma, though relatively rare, can significantly impact a patient's quality of life due to its often late diagnosis and the complex treatment it may require. Patients may experience abdominal pain, which can be debilitating. Symptoms such as nausea, vomiting, and jaundice can affect daily functioning and comfort. The disease itself and the side effects of treatment can lead to significant fatigue. Gallbladder removal (cholecystectomy) and other surgical interventions can lead to complications and affect digestive health. **Chemotherapy** treatments can cause side effects such as nausea, vomiting, hair loss, and decreased appetite. [1]

The diagnosis of cancer and its treatment can lead to anxiety, depression, and a reduced sense of well-being. Changes in physical appearance or function due to surgery or treatment can affect self-esteem and body image. Treatment and symptoms may limit the ability to work or engage in usual activities, affecting social and economic aspects of life. The presence of a strong support network can positively impact QoL, while lack of support may exacerbate feelings of isolation. Gallbladder carcinoma often has a poor prognosis due to late diagnosis. This can affect patients' outlook on life and their long-term QoL. [2]

Utilize appropriate analgesics, including opioids and non-opioid pain relievers, based on the severity of pain. Consider methods such as physical therapy, acupuncture, or massage to complement medication. A multidisciplinary approach, involving oncologists, surgeons, palliative care specialists, dietitians, and psychologists, can help address the diverse needs of patients and

improve their QoL. Proper nutrition can help manage symptoms and improve overall health. Use antiemetics to control nausea and bile acids to address digestive issues. Physical therapy and rehabilitation services can aid in recovery and help patients regain functionality. [3] Teach relaxation techniques, such as mindfulness, meditation, and breathing exercises. Offer education about the disease and coping strategies to help patients and their families understand and manage their emotional responses.

Gallbladder carcinoma is one of the fifth most common malignancies and the third most common cause of cancer mortality on global scale. The quality of life (QOL) is the major concern in all evaluative research. Improved quality of life is probably the most desirable outcome of all health care policies. [4] QOL is also defined as the degree of satisfaction or dissatisfaction felt by an individual on various aspects of their life and experience of life. [5] The quality of life in a general idea encompasses several aspects of life including physical, psychological, social, financial, spiritual, cognitional and sexual. A disturbance in any of these aspects will in term affect the related and overlapping domains thus, diminishing the overall QOL. QOL is an outcome measure worth considering for developing a holistic approach for measuring the impact of treatment. To maximize the QOL individual has to cope with emotional trauma of his new body image and daily care. In such fragile situations there is often an enhanced need of emotional support and patient educator. [6]

Although measuring QOL, has been a significant challenge because of lack of consensus on the definition of QOL. Though research in this field has advanced rapidly, numerous instruments now exist for

measuring the QOL and symptoms burden, ranging from universal health status measures to considerably more focusedsymptom measures. QOL measures have been routinely incorporated in clinical trials, and their employment in clinical settings is strongly recommended in cancer patient management. [7]

Gallbladder carcinoma presents significant challenges that affect multiple aspects of a patient's life. Addressing these through a comprehensive, multidisciplinary approach that includes symptom management, psychological support, and social assistance is crucial in improving QoL for these patients. Continuous research and advancements in treatment and supportive care are essential for enhancing QoL and outcomes in this patient population.

**Material and methods**

This cross-sectional study was conducted in the department of Department of General Surgery and Surgical Oncology. The study was conducted among patients with histologically proven cases of the carcinoma of the gallbladder. The study and questionnaire were explained to all the participants. While collecting the data the questions were read to the participants and the answers were recorded. Question related to the variables were answered using a five–point scale 1to 5. After the patient understands has been confirmed, he/ she was encouraged to complete every item in order without skipping any. Reliability test was done with 30 patients. The patients were interviewed at the time of admission preoperatively or before treatment and postoperatively or after treatment at the intervals of 1-3-6 and 9 months.

**Inclusion Criteria**:

- Diagnosis of gallbladder carcinoma confirmed by histopathology.
- Adult patients (age 18 or older).

- Ability to provide informed consent.

**Exclusion Criteria**:

- Patients with other active malignancies.
- Patients with poor general condition
- Individuals with cognitive impairments that prevent them from understanding or completing the assessments.
- Those unable to communicate effectively due to language barriers or other reasons.

**Quality of Life Assessments**:

- **Standardized QoL Questionnaires**: Use validated tools such as the **EORTC QLQ-C30** (European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire), which assesses overall QoL, physical functioning, role functioning, emotional functioning, cognitive functioning, and social functioning.
- **Disease-Specific Tools**: Include questionnaires like the **EORTC QLQ-BIL21**, tailored for biliary tract cancers, to assess disease-specific concerns and symptoms.

**Symptom Assessment**:

- **Pain Scales**: Utilize tools such as the Brief Pain Inventory (BPI) or Visual Analog **Scale (VAS)** for measuring pain intensity and its impact on daily life.
- **Symptom Diaries**: Patients may be asked to keep diaries to record symptoms such as nausea, vomiting, and fatigue.

**Psychological Assessment**:

- **Depression and Anxiety**: Employ scales like the **Hospital Anxiety and Depression Scale (HADS)** or **Beck Depression Inventory (BDI)** to assess psychological well-being.
- **Stress and Coping**: Use instruments like the **Perceived Stress Scale (PSS)** and **Coping Strategies Inventory (CSI)**.

**Functional Status**:

- **Performance Status**: Use the **Eastern Cooperative Oncology Group (ECOG)**
- **Performance Status** or **Karnofsky Performance Status** to evaluate functional capacity.

**Social and Economic Impact**:

- **Social Support**: Assess social support using scales like the **Social Support Questionnaire (SSQ)**.
- **Economic Burden**: Evaluate financial impact through patient-reported measures of healthcare costs, employment changes, and financial strain.

**Statistical Analysis:**

Descriptive statistics were used for quantitative measurement, and qualitative observations were presented by suitable statistical measures. As per nature of the data parametric or non-parametric test statistic was used to test the associations or differences. Multinomial analysis was done to estimate factors affecting QOL and for differences either of Student's t-test, or F test was used.

**Result: -**

For the study of this nature, suitable interventions are always at the back of the mind, so that the patient suffering from Gallbladder carcinoma can be taken up for effective management. Evidently for such an endeavor one need to examine the disease ecology in term of determinants.

**Table 1: Shows the Descriptive analysis of QOL parameters score, mean, at 0 month**

| Sr. No | QOL (Parameters) | Mean± Std. Deviation |
|---|---|---|
| 1 | PWB | $10.23 \pm 1.33$ |
| 2 | SWB | $11.19 \pm 1.07$ |
| 3 | EWB | $05.58 \pm 1.06$ |
| 4 | FWB | $05.09 \pm 1.22$ |
| 5 | Additional concern | $24.07 \pm 4.33$ |
| 6 | TFACTHEP | $71.35 \pm 10.13$ |

**Table 2: Shows the Mean and SD of significant pairs of chemotherapy group and Student Newman Keuls test (SNK) to identify significant pairs**

| QOL Parameter | Chemotherapy Drug Regimens Type of Drugs | Mean± Std. Deviation |
|---|---|---|
| SWB6 | 1 | $12.24 \pm 1.197$ |
| | 2 | $8.72 \pm 1.049$ |
| | 3 | $9.37 \pm 1.058$ |
| | 4 | $12.18 \pm 1.112$ |
| EWB6 | 1 | $8.35 \pm 2.112$ |
| | 2 | $4.34 \pm 1.146$ |
| | 3 | $7.61 \pm 1.135$ |
| | 4 | $10.40 \pm 1.113$ |

**Table 3: Shows the Pretreatment score (baseline) QOL score and long term follow up QOL score.**

| QOL Parameter | Pretreatment QOL Score | QOL (Parameters) Pretreatment QOL Score | | | |
|---|---|---|---|---|---|
| | Mean±SD 0 Month | Mean±SD 1 Month | Mean±SD 3 Month | Mean ±SD 6 Month | Mean ±SD 9 Month |
| Physical well being | 11.22±1.33 | 12.10 ±2.0 | 15.81 ± 2.76 | 16.12 ± 2.03 | 18.00 ± 1.55 |
| Social well being | 13.05±1.31 | 13.21± 1.2 | 14.24 ± 1.07 | 13.11 ± 1.02 | 16.77 ± 1.88 |
| Emotional well being | 10.11±1.08 | 10.34 ± 1.4 | 10.49 ± 1.29 | 9.36 ± 1.13 | 12.77 ± 2.53 |
| Functional well being | 10.01±1.10 | 12.17 ± 1.2 | 10.62 ± 1.26 | 8.13 ± 1.0 | 12.15 ± 1.33 |
| Additional concern | 20.12±2.12 | 27.10 ± 3.1 | 17.21 ± 5.08 | 32.58 ± 4.09 | 39.45 ± 6.59 |
| Total fact hep | 85.10±7.27 | 183.1 ± 8.3 | 77.10 ±8.44 | 93.29 ±6.02 | 99.9 ± 10.43 |

At one month of treatment, observation indicated that patients with surgical treatment were found to be significant difference between the treatment groups with regard to FWB and additional concern QOL parameter. QOL of surgical patients was having significant difference between the groups indicates improvement with regard to Total FACT Hep parameter. Surgical treatment was performed in total 15 patients. At three months of treatment, there was no any significant difference was found in the treatment groups. At the three months of treatment, only 25 patients were survived. There was significant difference was observed with regard to additional concern parameter of QOL. At six months of treatment, the condition of the patient was deteriorating. Only 10 patients were remaining at the 6 months of treatment. At the nine months of treatment, QOL of the patient was found to be significantly deteriorating with regard to Total fact hep QOL parameter.

## Discussion

Assessing well-being in patients diagnosed with gallbladder carcinoma involves a multidimensional approach due to the complexity and severity of the condition. Gallbladder carcinoma, being a relatively rare and often aggressive cancer, can significantly impact various aspects of a patient's life. Evaluating well-being requires a comprehensive approach that considers the physical symptoms, functional status, and side effects of treatment. Addressing pain, nutritional needs, and daily functioning are essential for maintaining the quality of life. Psychological distress is a common challenge for these patients. Regular screening for anxiety, depression, and overall mental health, coupled with strong support systems, plays a vital role in improving their emotional well-being. Tools and scales that assess overall quality of life, pain, and symptom management are valuable for understanding and addressing the impact of the disease and its treatment on the patient's daily life. Regular assessment of cognitive function and addressing existential and spiritual needs contribute to a more holistic understanding of the patient's experience. [5]

Ensuring that care is tailored to individual needs and preferences enhances patient satisfaction and supports overall well-being. Effective communication and addressing educational needs about the disease and treatment are key components. A team-based approach involving oncologists, palliative care specialists, mental health professionals, and support services is

essential to address the diverse needs of gallbladder carcinoma patients comprehensively. [7]

## Conclusion:

Assessing well-being in patients diagnosed with gallbladder carcinoma is a multifaceted and crucial aspect of their care. Given the aggressive nature of the disease and the impact of treatments, a thorough evaluation encompasses physical, emotional, and psychosocial dimensions. Psychological and behavioral interventions that could enable the carcinoma of the gallbladder patient to cope better are independent and well informed about the treatment which might improve quality of life in remaining years.

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