

QUALITY OF LIFE FOR PATIENTS WITH BONE TUMORS

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ABSTRACT

Despite the rarity, bone tumors are among the most types of cancer that influence patients' quality of life by causing pain, fatigue, and reduction in physical activity level, as well as having substantial psychological and social impact. The purpose of this study is to assess the quality of life of patients who have been diagnosed with bone tumor. This descriptive study used WHO quality of life questionnaire, EORTC QLQ-C30, EORTC QLQ-BM22, to collect data from 120 patients in (specialized nuclear medicine and oncology hospital), from December 1, 2021 to March 1, 2022. Descriptive and inferential statistics utilized to analyze data by (SPSS) program version 27, with Chi-square test and $P < 0.05$ significant level. (87.5%) of patients were diagnosed with metastatic bone tumor, while (12.5%) diagnosed with primary bone tumor, the highest percentage of patients was women (66.7%). The study found that the bone tumor had negative impact on patient quality of life in term of physical activity, fatigue, inability to work, worry and negative feelings, and sleep problems. Metastatic bone tumor is significantly more common than primary bone tumor. Bone tumors have significant impact on patients' quality of life in physical, independency, and psychological domains. There is a significant correlation between patient' financial difficulties and his or her psychological condition.



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1. INTRODUCTION

Recent studies have placed more importance on patient quality of life, and as treatments and medical technology advance and the median survival time for patients with bone tumor increases (1-5years), the number of studies examining quality of life of patients with bone tumors has increased.

Pain is common and frustrating symptoms in patient with bone tumors. Uncontrolled pain can disrupt daily functioning and affect and interfere with quality of life [2]. Bone tumor patients suffer greatly from psychological distress at some point during interval of disease, psychological distress has a significant impact on patients' quality of life, as well as negative impact on survival [6]. Knowing more about the aspects of quality of life affected by bone tumors may allow us to improve these aspects; from this perspective, many studies have been conducted around the world, and this is the first in the country on this subject.

Objectives: this paper describes and analyses the impact of bone tumor on patients' quality of life across five domains (physical, independence, psychological and social, environmental, and spiritual). In addition to find out the relationship between the quality of life of patients with bone tumor and their demographical characteristics.

2. Material and Methods

In this descriptive study, WHO quality of life questionnaire, EORTC QLQ-C30, EORTC QLQ-BM22, were used to collect data from 120 patients in (specialized nuclear medicine and oncology hospital) for the period from December 1,2021 to March 1, 2022. After data collection, descriptive and inferential statistic were used by (SPSS) version 27 to analyze the data and find the results. Chi-square test and $P < 0.05$ significance level, used to find out relationships between variables of the study.

3. Results

Patients characteristics: as shown in table (4-1) 120 patients enrolled in study, fifteen patients (12.5%) diagnosed with primary bone cancer, while 105 patients (87.5%) diagnosed with metastatic bone tumor. Most of metastatic bone tumor spread from breast cancer (51.6%). The demographical characteristics show that the most patients were female (66.7%), (51-60 years) was the most frequent age group (32.5%), highly percentage of patients' lives in urban area (64.2%), (55%) of patients did not have family history of bone tumors, the most frequent survival rate (1-5 years) (59.1%). The patients have a moderate quality of life in general as shown in table (4-2), but they have a poor quality of life in some aspects in physical and psychological domains as evident in patients answers to the questions related to physical and psychological aspects, which are illustrated in figures (4-1, 4-2). smoking demonstrated a correlation with patients' quality of life, and for which the test significance was ($P=0.019$) which was less than the test significance level (0.05). as shown in table (4-3).

Table (1) shows the demographic characteristics of patients.

Demographic characteristic		Frequency	%
Age group	(51-60 years)	39	32.5
	More than 70 years	4	3.3
Gender	Male	40	33.3
	Female	80	66.7
Residence	Urban	77	64.2
	Rural	43	35.8
Family history	Positive	54	15
	Negative	66	55
Survival rate	(1-5 years)	71	59.1
Tumour type	Primary	15	12.5
	Metastatic	105	87.5

Table (2) shows the types quality of life (good, moderate, poor) in physical domain and psycho-social domains according to frequency, percentage, mean, and standard deviation of patient's answers.

physical domain	Freq.	%	mean	SD

Good	19	15.8	3.9132	0.142232
Moderate	96	80.0	3.1244	0.33536
Poor	5	4.2	2.1160	0.22052
Total	120	100.0	3.2274	0.47904
Psycho-social domain	Freq.	%	mean	SD
Good	1	0.8	3.67	
Moderate	118	98.3	2.9810	0.23138
Poor	1	0.8	2.33	
Total	120	100.0	2.9813	.24518

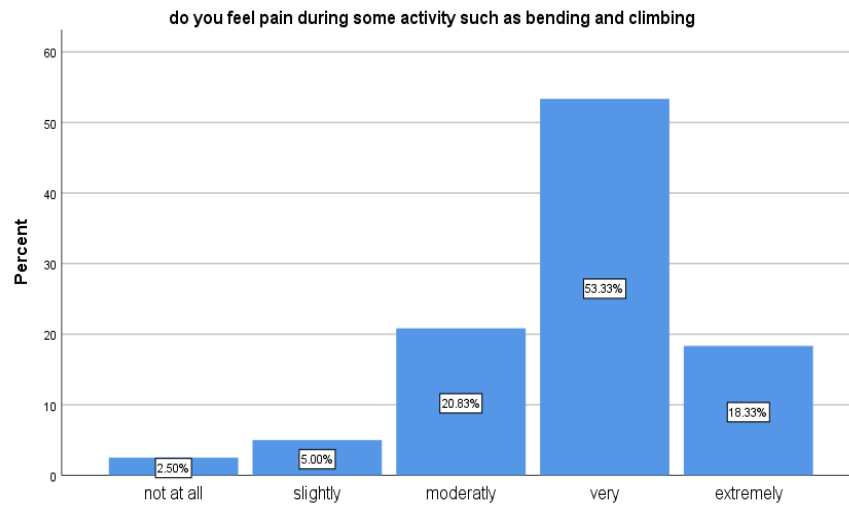


Figure (4-1) patients answers about feeling of pain during physical activities.

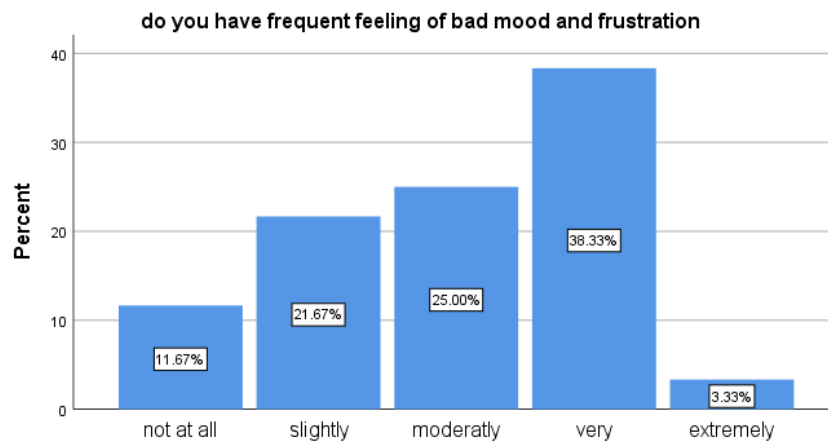


Figure (4-2) patients answers about frequency of negative feeling.**Table (3)** the types quality of life domains according to patients factors

Demographic data	groups	Overall evaluation			Chi-square value	d.f	p-value			
		Slightly	Moderately	Very						
Age	(10-20)	0	7	1	7.412	12	0.829			
	(21-30)	0	6	1						
	(31-40)	0	12	1						
	(41-50)	1	21	0						
	(51-60)	0	36	3						
	(61-70)	0	25	2						
	more	0	4	0						
Total	1	111	8							
Gender	male	1	38	1	3.603	2	0.165			
	Female	0	73	7						
	Total	1	111	8						
Marital status	Single	0	7	1	2.379	6	0.882			
	Married	1	91	5						
	Widow	0	12	2						
	Divorced	0	1	0						
	Total	1	111	8						
Occupation	Private work	1	17	0	10.768	8	0.215			
	Employed	0	12	0						
	Retried	0	15	0						
	Unemployed	0	7	1						
	House wives	0	60	7						
	Total	1	111	8						
	Former smoker	0	11	0						
	Smoker	1	10	0						
	Total	1	111	8						
Diagnosis period	Less than 1 years	1	26	2	3.547	6	0.738			
	1-5 years	0	66	5						
	6-10 years	0	14	1						
	More than 10 years	0	5	0						
	Total	1	111	8						

4. Discussion

As mentioned earlier the highest percentage (87.5%) of sample were metastatic bone tumor, while primary bone tumor makes up only (12.5%). [4] suggest that the primary bone tumor is rare and constitute less than 0.02% of all cancer diagnosed in united states. [3] confirmed that 18 million cancer cases around the world are recorded each year, and 50% of them developed into metastatic cancer, the study also indicate that most spread rates to the bone are as follow: from breast 70%, from prostate 85%, and from lung 40%. This result agrees with our current study.

The result of current study showed that (53.3%) of patients suffer from pain to great extent, and the rest of patients suffer from it in varying proportions. According to the findings of study conducted in Switzerland [7], (68%) of patients suffer from mild to moderate pain, while (44%) suffer from sever pain, which is agree with the finding of current study.

The finding of current study showed that (52.5%) of patients suffer from fatigue to a great extent, and (26.6%) suffer from sever fatigue. [5] suggest that cancer-related fatigue is a serious problem that impair patients physically, mentally, and socially.

Regarding the independence domain, (40%) of patients are unable to work at all, while (34.2%) are able to work to a very small degree. According to study conducted in Finland [8], (30%) of cancer patients are unable to work, and number of cancer patients unable to work is increasing in particular types of cancer such as bone cancer, this result agrees with current study. The results shows that there is significant correlation between patients' financial difficulties and his or her psychological condition deterioration, at significant level ($P=0,00$). The result of study conducted in USA [1] revealed that financial difficulties have a significant impact on the psychological aspects of patients, with an increase in depression and negative feelings.

5. Conclusion

The highest percentage of patients suffer from metastatic bone tumour, while the lowest percentage diagnosed with primary bone tumour. The highest percentage of metastatic bone tumour spread from breast cancer, then from prostate, lungs, bladder, et al. The age group (51-60 years) has the highest prevalence rate, and the majority of those affected are women (66.7 percent), housewives, illiterate, married, and live in urban areas. Most of patients suffer from moderate to severe pain, feeling of tiredness and fatigue, disable to work, feeling sad and depressed. In demographic characteristics there is only a relationship in term of smoking and patients' quality of life.

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