6. Oncofertility Consortium. Sickle Cell Anemia. Chicago, Northwestern University, 2014. Available online at http://oncofertility.northwestern.edu/resources/sickle-cell-anemia.
7. Agbaraji VO, Scott RB, Leto S, Kingslow LW. Fertility studies in sickle cell disease: semen analysis in adult male patients. Int J Fertil 1988;33:347-352.
8. Abudu EK, Akanmu SA, Soriyan OO, Akinbami AA, Adediran A, Adeyemo TA, Okany CO. Serum testosterone levels of HbSS (sickle cell disease) male subjects in Lagos, Nigeria. BMC Res Notes 2011;4:298.
9. Gharwan H, Neary NM, Link M, Hsieh MM, Fitzhugh CD, Sherins RJ, Tisdale JF. Successful fertility restoration after allogeneic hematopoietic stem cell transplantation. Endocr Pract 2014;20:157-161.

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Assessment of Quality of Life of Chronic Myeloid Leukemia Patients by Using the EORTC QLQ-C30

Kronik Miyeloid Lösemili Hastaların Yaşam Kalitesinin EORTC QLQ-C30 Anketi Kullanılarak Değerlendirilmesi

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To the Editor,

Depression is determined in 15%-25% of patients with cancer and it is accepted as a comorbid problem with poor prognosis. The quality of life of these patients is determined to be poor [1,2]. We aimed to study the quality of life of patients using new forms of imatinib, dasatinib, or nilotinib.

We analyzed 56 chronic myeloid leukemia patients followed in the İzmir Tepecik Training and Research Hospital Department of Hematology. Patients were followed from 2005 to 2015. We included patients who were >18 years of age, BCR-ABL-positive based on polymerase chain reaction results, using first- or second-generation tyrosine kinase inhibitors (TKIs) in the last 6 months, and in the chronic phase of the disease.

The Turkish version of the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire-C30 (EORTC QLQ-C30) [3], the Turkish version of the Hospital Anxiety and Depression Scale [4], and the General Health Questionnaire [5] were administered to patients one-on-one. The study received approval from the ethics committee.

The demographic data and laboratory values are provided in Table 1.

In our study, we found no statistical significance between first- and second-generation TKIs. We also compared dasatinib and nilotinib as subgroups of the second generation and we found statistical significance for dasatinib against nilotinib for general life quality, emotional and cognitive functions, and fatigue parameters.

Keywords: Cytogenetic, Chronic myeloid leukemia, Molecular hematology, Life-quality, Dasatinib, Nilotinib

Anahtar Sözcükler: Sitogenetik, Kronik miyeloid lösemi, Moleküler hematoloji, Yaşam kalitesi, Dasatinib, Nilotinib

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Table 1. Demographic datas, laboratory findings, follow up, Hospital Anxiety and Depression Scale, General Health Questionnaire, Eastern Cooperative Oncology Group and Karnofsky scores, general medical, functional and symptom scales of European Organization for Research on Treatment of Cancer Questionnaires Quality of Life-C30 between 1st generation tyrosine kinase inhibitor and 2nd generation tyrosine kinase inhibitor (dasatinib and nilotinib).

	1. Generation	2. Generation				
		Dasatinib	Nilotinib	p value[1]	Total	p value[2]
Age (year)	56.7±1.2	53.5±1.5	57.7±1.5	0.17	53.3±1.4	0.29
Gender (n)						
Male	16	5	6		11	-
Female	19	2	3		5	-
Hemoglobin (g/dL)	11.9±1.8	11.5±1.5	11.4±2.7	0.40	11.3±1.9	0.81
Platelet (/uL)	298000±1.5	212000±6.0	342000±1.8	0.33	287000±1.5	0.71
Leukocyte (/uL)	76050±1.1	51300±9.0	101000±7.5	0.11	84080±8.0	0.30
Follow up (month)	57.2±34.6	74.8±3.0	61±2.5	0.07	65.2±28.0	0.15
ECOG	0.17±0.5	0.0±0.0	1.0±1.4	0.09	0.26±0.7	0.84
Karnofsky	95.5±8.5	93.3.±5.7	85.0±17.0	0.21	93.3±10.4	0.24
HADs-A	8±4.1	8.6±4.1	10.5±2.0	0.18	8.3±4	0.76
HADs-D	5.8±4.1	8.3±3.2	10.5±4.2	0.72	6.1±4.4	0.86
GHQ	22.3±5.3	20.6±2.0	26.5±9.1	0.08	23.2±6.1	0.83
Scales of EORTC-QoL-C30						
General medical scale	57.2±22.1	68.1±18.1	39.6±22.6	0.016*	52.1±24.8	0.95
Functional Scales of EORTC-QoL-C30						
Physical scale	73.8±17.0	81.4±2.2	68±2.0	0.142	73.9±21.4	0.31
Role scale	88.6±19.0	98.2±4.7	80.5±2.4	0.252	88.2±20.1	0.70
Emotional scale	77.9±23.7	95.5±7.8	68.7±20.4	0.005*	80.4±20.8	0.63
Cognitive scale	78.5±21.9	96.4±6.0	95.2±32.3	0.023*	78.9±28.7	0.37
Social scale	87.8±20.4	94.6±9.8	79.1±16.5	0.091	85.9±15.7	0.60
Symptom Scales of EORTC-QoL-C30						
Fatique	31.3±21.3	19±1.3	50.3±1.9	0.005*	36.6±23.2	0.67
Nausea	13.5±19.5	5.3±9.8	9.7±1.6	0.681	7.8±13.5	0.21
Pain	20.3±23.6	10.7±1.3	33.3±2.6	0.114	24.3±24.0	0.40
Dispnea	11.4±19.0	7.1±12.1	25±33.0	0.408	17.1±26.9	0.11
Insomnia	15.7±21.9	7.1±12.1	30.5±37	0.351	20.3±30.5	0.07
Loss of appetite	13.9±17.6	14.2±13.3	22.2±23.1	0.606	18.7±19.3	0.75
Constipation	12.1±17.5	10.7±1.3	30.5±2.4	0.114	21.8±22.1	0.58
Diarrhea	10.7±22.1	3.5±9.4	16.6±2.1	0.299	10.9±18.1	0.83
Financial effect	18.5±25.9	14.2±2.8	44.4±3.2	0.091	31.2±33.5	0.05

*p<0.05, p value[1]: Between dasatinib and nilotinib, p value[2]: Between 1st generation and 2nd generation tyrosine kinase inhibitor,

HADs: Hospital Anxiety and Depression Scale, ECOG: Eastern Cooperative Oncology Group, EORTC-QoL: European Organization for Research on Treatment of Cancer Questionnaires Quality of Life-C30, GHQ: General Health Questionnaire.

References

1. Wilson KG, Chochinov HM, Shirko MG, Allard P, Chary S, Gagnon PR, Macmillan K, De Luca M, O'Shea F, Kuhl D, Fainsinger RL, Clinch JJ. Depression and anxiety disorders in palliative cancer care. J Pain Symptom Manage 2007;33:118-129.
2. Lloyd-Williams M, Friedman T. Depression in palliative care patients-a prospective study. Eur J Cancer Care (Engl) 2001;10:270-274.
3. Guzelant A, Goksel T, Ozkok S, Tasbakan S, Aysan T, Bottomley A. The European Organization for Research and Treatment of Cancer QLQ-C30: an examination into the cultural validity and reliability of the Turkish version of the EORTC QLQC30. Eur J Cancer Care Engl 2004;13:135-144.
4. Aydemir O. Validity and reliability of Turkish version of Hospital Anxiety and Depression scale. Turkish Journal of Psychiatry 1997;8:280-287.
5. Kilic C. General health questionnaire: a validity and reliability study. Turkish Journal of Psychiatry 1996;7:3-9.

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