

Self-perceived oral health in hemato-oncological patients and the relation to quality of life



Alexa M.G.A. Laheij^{1,2}, Linda M. Dillen¹, Erfan Nur^{3,4}, Judith E. Raber-Durlacher^{1,2}

¹Department of Oral Medicine, Academic Centre for Dentistry (ACTA), University of Amsterdam and Vrije Universiteit Amsterdam, The Netherlands.

²Department of Oral Maxillofacial Surgery, Amsterdam UMC, University of Amsterdam, Amsterdam, The Netherlands.

³Department of Hematology, Amsterdam University Medical Centers, University of Amsterdam, Amsterdam, The Netherlands.

⁴Sanquin Research and Landsteiner Laboratory, Department of Blood Cell Research, Amsterdam, The Netherlands.



Academic Centre for Dentistry Amsterdam

Introduction

- Patients treated for hematologic malignancies may experience treatment-induced complications of the oral cavity and peri-oral tissues. Patients may experience late oral complications such as xerostomia, hyposalivation, higher caries activity, taste changes and oral graft versus host disease (in alloHCT patients) possibly leading to lower quality of life.
- Salivary gland dysfunction leads to a higher risk of caries and fungal infection, as protective properties of saliva are less present in the oral cavity. Several drugs used in the treatment of hematologic patients cause dry mouth and thereby also contribute to this problem.
- Studies on long term oral complications of therapies for hematologic malignancies are scarce. Since the number of patients with hematologic malignancies is increasing due to both increased incidence and improved survival, more patients will possibly suffer from oral complications after treatment. It is not clear to what extent these patients report these oral complications

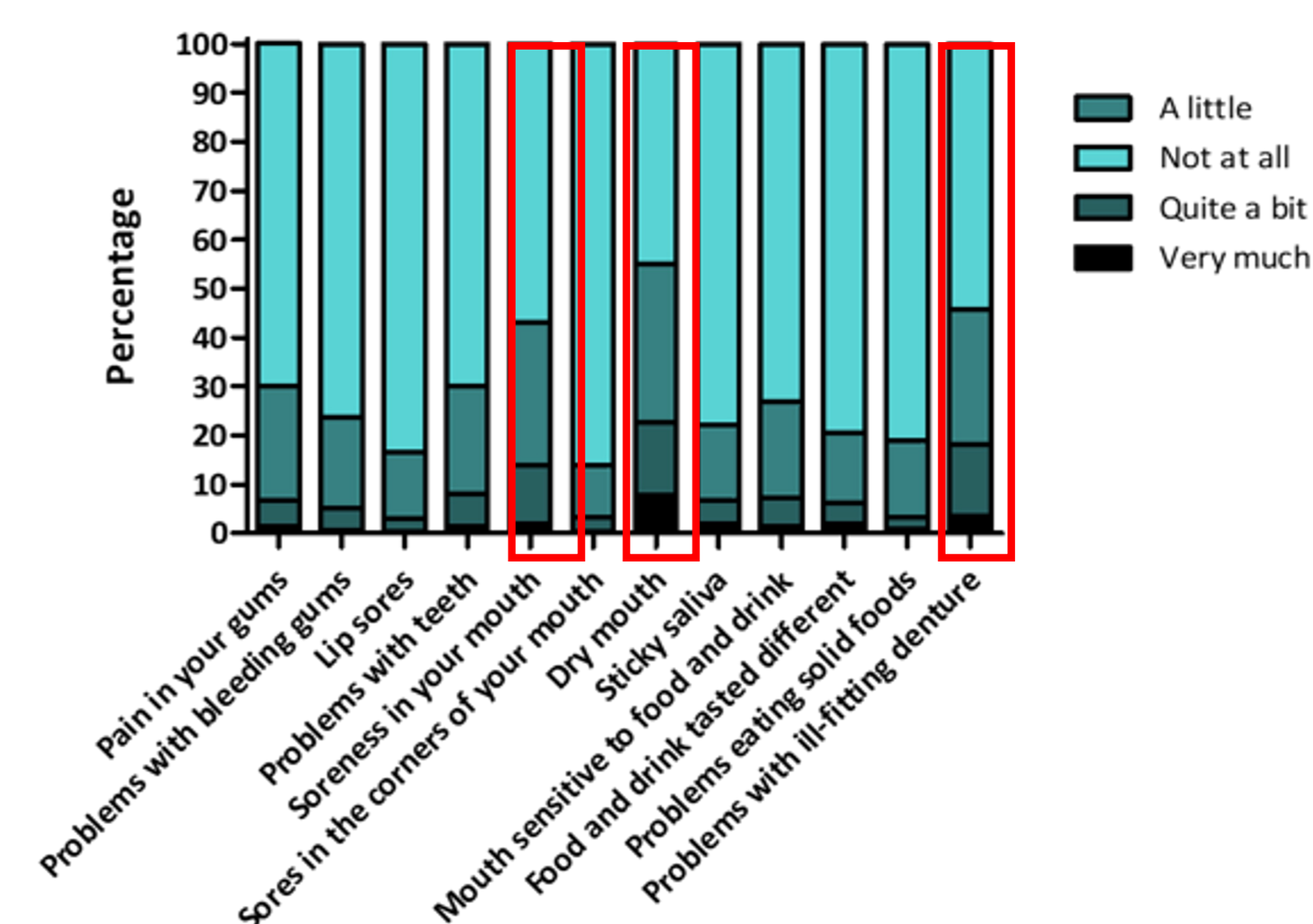
Materials and Methods

- This study was classified as a non-WMO study (METC Amsterdam UMC, W21_272 # 21.299). Participants were recruited through the newsletter and social media channels of HEMATON, the Dutch association of patients diagnosed with hematologic malignancies. Data were collected between October and December 2021.
- First general questions were answered about patient characteristics, medical diagnosis, treatment (history), and dental status. Then, patients completed questionnaires about xerostomia (shortened XI), quality of life (EORTC QLQ-30) and oral symptoms (EORTC OH-15)
- Results were analysed using descriptive statistics. Differences in groups regarding the presence/absence of xerostomia were analysed using the Chi-square test. Correlations were calculated using the Pearson correlation coefficient. Predictors for xerostomia scores were calculated by linear regression analysis using the enter method.

Results

- 764 responses were recorded, yielding a response rate of 13.4%. The final sample size consisted of 705 participants
- 40.5% of patients met the criteria for xerostomia
- Patients reported a mean score of 88.1 (±12.4) on the OH-15, which is good

Figure 2: QLQ-OH15: Scores per question



Results

Table 1. patient characteristics

Variables	Groups	Mean	SD	Minimum-Maximum
Age		63.2 years	10.1	21 – 86
			N	%
Gender	Male	335		47.5%
	Female	370		52.5%
Hematologic malignancy	Lymphoma	254		36.0%
	Non-Hodgkin lymphoma	197		77.6%
	Hodgkin lymphoma	45		17.7%
	Hairy cell leukemia	5		2.0%
	Not known	7		2.8%
	Leukemia	191		27.1%
	Acute	53		27.7%
	Chronic	132		69.1%
	Not known	1		0.5%
	Multiple myeloma/Kahler's disease	140		19.9%
	Myelodysplastic syndrome (MDS)	21		3.0%
	Other hematologic malignancy	81		11.5%
	Multiple diagnoses	20		2.8%
Medication use	No	167		23.7%
	1-3	329		46.6%
	4 or more	209		29.6%

Table 2. Oral hygiene habits

		N	%
Toothbrushing	≥ 2 per day	523	74,2%
	Once a day	172	24,4%
	Multiple times a week	6	0,9%
Interdental cleaning	≤ 1 per week	4	0,6%
	≥ per day	384	54,5%
	Multiple times a week	144	20,4%
Use of toothpaste with fluoride	≤ 1 per week	132	18,7%
	Not applicable	45	6,4%
	Yes	553	78,4%
Dental check-up	No	100	14,2%
	Unknown	52	7,4%
	Yes	621	88,1%
Dental check-up	≥ 1 per year	621	88,1%
	Once every 2-3 years	21	3,0%
	Irregularly	35	5,0%
	Only in case of dental emergency	21	3,0%
	Never	7	1,0%

Table 3. Predictors for xerostomia score

Predictors	Unstandardized coefficients B	p-value
Different hemato-oncological treatment groups	-0.018	.699
History of HCT	.161	.024*
Female gender	1.323	<.001*
Received radiation to head and neck	-.713	.016*
Medication use	.466	<.001*

- Woman, patients that use more daily prescribed medications, patients that were precisely irradiated to the head and neck area and patients with history of allogeneic SCT reported more xerostomia
- There was a moderate negative correlation between xerostomia and the oral health related quality of life subscale score (8 items) ($r = -.588, p < 0.01$)

Aim

To assess the self-reported oral health and oral health related quality of life of patients with (a history of) hematologic malignancies.

Conclusion

Patients with hematologic malignancies frequently reported having a dry mouth and other oral complaints including mouth soreness and sensitivity, gingival pain/bleeding and problems with teeth. Despite of having these oral complaints, most patients experienced a rather good OH-QoL.