Loneliness predicts physical function of Japanese head and neck cancer patients

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Introduction

Head and Neck Caner (H&N cancer)

➤ General term for a group of biologically similar cancers around head and neck area.
➤ Including larynx cancer, pharynx cancer, oral cancer, and nasal cavity cancer.
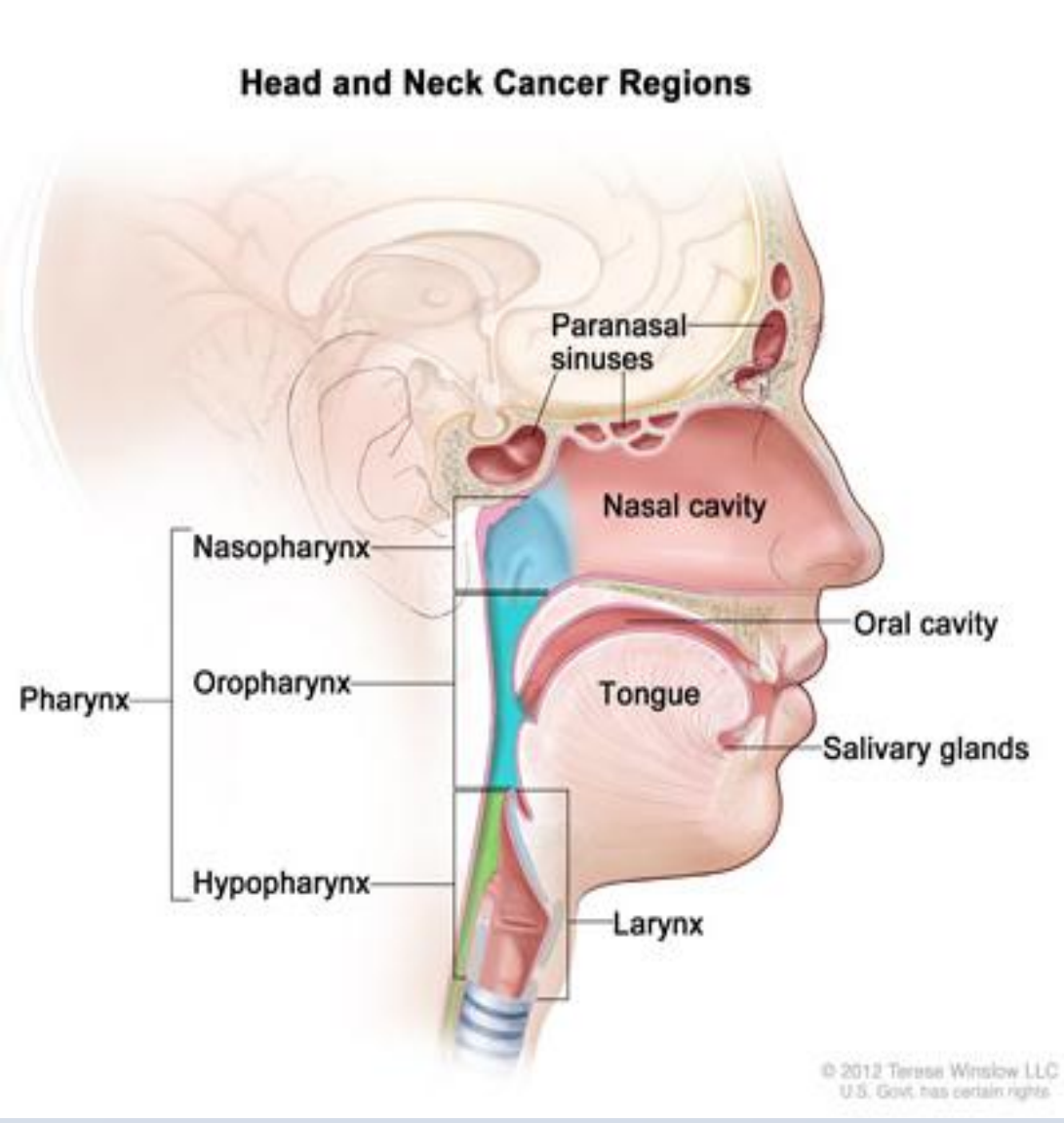
Medical treatments impair ability to breathe, swallow, or vocalize (Disease-specific quality of life).

→It is important for patients with H&N cancer to maintain their Disease-specific QOL.

Head and Neck Cancer Regions

Paranasal sinuses
Nasal cavity
Nasopharynx
Oral cavity
Pharynx
Oropharynx
Tongue
Salivary glands
Hypopharynx
Larynx

- Decreased social support is a risk factor of poor Disease-specific QOL
  (Pendo et al., 2012, J Support Oncol.; Karnell et al., 2007, Head Neck.)

- Support group is associated with improved Disease-specific QOL
  (Vakharia et al., 2007, Otolaryngol Head Neck Surg.)

  →However some patients perceive that they have poor social support even if they get enough support objectively

  →It is not well understood that the relationship between subjective social support and Disease-specific QOL

Objectives

To identify the impact of subjective social support on Disease-specific QOL peculiar to H&N caner patients in Japan.

Methods

Design

Cross-sectional, single-center study

Participants

122 inpatients with H&N cancer at Medical Hospital of Tokyo Medical & Dental University between Sep. 2011 to Mar. 2013.

Measures

①Questionnaire

- **Disease-specific QOL**: Functional Assessment of Cancer Therapy for Head & Neck Cancer (FACT-H&N-HNC)

FACT-HNC (Likert scale: 0-4point on each question)	
1. I am able to eat the foods that I like.	6. I am unhappy with how my face and neck look.
2. My mouth is dry.	7. I can swallow naturally and easily.
3. I have trouble breathing	8. I smoke cigarettes or other tabacco products.
4. My voice has its usual quality and strength.	9. I drink alcohol (e.g. beer, wine, etc.)
5. I am able to eat as much food as I want.	10. I can eat solid foods.
	11. I have pain in my mouth, throat or neck.

- **Subjective social support**: the revised UCLA Loneliness Scale

②Patients' health record

- Sociodemographic data: gender, age
- Disease-specific data: cancer site, treatment during hospitalization, and duration of hospitalization

Statistical analysis

To examine whether loneliness effects on Disease-specific QOL, hierarchical multiple linear regression analysis were done to rule out the possibility that group differences in out come were due to confounders. Independent variables (Radiation therapy, Surgery, Duration of hospitalization) were chosen based on their hypothetical potential to influence and mediate the relationship between loneliness and Disease-specific QOL.

Results

Table 1. Demograhic data

	n/M	(%/SD)
Gender		
Male	75	(86.2)
Female	12	(13.8)
Age		
30-39 years	4	(4.6)
40-49 years	8	(9.2)
50-59 years	16	(18.4)
60-69 years	34	(39.1)
70-79 years	19	(21.8)
80-89 years	6	(6.9)
Cancer site		
Larynx	8	(9.2)
Pharynx	55	(63.2)
Oral	20	(23.0)
Others	4	(4.6)
Treatment		
Radiation therapy	14	(16.1)
Chemotherapy	23	(26.4)
Surgery	50	(57.5)
Duration of hospitalization		
(days)	16.9	(12.9)

Table 2. Effects on Disease-specific QOL with hierarchial multiple linear regression analysis

Characteristics	standardized β	95% CI lower	95% CI upper	p
Step1 ⊿R²=.17				
Treatment				
Radiation therapy	-.30	-9.53	-1.12	.01
Surgery	-.22	-5.99	.08	.06
Hospitalization				
Duration of hospitalization	-.31	-.27	-.05	.00
Step2 ⊿R²=.24				
Treatment				
Radiation therapy	-.32	-9.82	-1.77	.01
Surgery	-.15	-4.95	-98	.19
Hospitalization				
Duration of hospitalization	-.26	-.24	-.03	.01
Loneliness				
Loneliness	-.30	-.31	-.07	.00

Discussion

Loneliness is an independent predictor of Disease-specific QOL

- Psychological support(and reduce a sense of loneliness) is required for H&N cancer patients to manage their own behavior.(Henry et al., 2013, Palliat Support Care.)
- Disease-specific management is important for the patients to maintain their QOL. (Pool et al., 2012, Gastroenterol Nurs.)
  →Self-care likely to be parameter of the relationship between loneliness and Disease-specific QOL.

Radiation therapy and Duration of hospitalization is an predictor of Disease-specific QOL

- Recent surgical techniques have become less invasive.
- Radiation therapy have some severe side effects such as skin injury.

We have to develop **alternative psychological care to decrease a sense of loneliness for H&N cancer patients**.

(Psychological support system from health provider, peer support system, and so on)

Acknowledgment

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