



Mucosal and dental late effects in long-term survivors after allogeneic stem cell transplantation with Norwegian condition regimen performed during childhood, adolescence or young adulthood



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BACKGROUND

Long-term survivors (LTS) of allogeneic hematopoietic stem cell transplantation (HSCT) may experience oral late effects. The NIH criterion for chronic oral graft versus host disease (GvHD) is lichen planus-like changes. LTS may also experience distinctive signs and symptoms of GvHD like xerostomia, mucosal atrophy, mucocelles and pseudomembranes. There is a high risk of dental developmental disturbances when patients are treated at a young age.

The primary aim of our study was to investigate oral late effects in LTS after allogeneic HSCT, treated with the Norwegian conditioning regimen mainly based on chemotherapy without total body irradiation (TBI).

SUBJECTS & METHODS

In this multidisciplinary, descriptive study 100 (64%) out of 157 invited LTS (>5 years) treated with allogeneic HSCT at Oslo University Hospital accepted participation.

Inclusion criteria:

- treated before 30 years
- older than 16 years at study start

Data were collected through:

- a self-report oral health questionnaire
- an oral examination including registration of mucosal changes and dental developmental disturbances
- a panoramic x-ray

Characteristics of the LTS (n=100)

Treated for malignancy	74%
Female gender	54%
Age at start of HSCT:	
Mean (range)	17,4 yrs (0.7-29)
Age at oral examination:	
Mean (range)	34,4 yrs (16–58)
Follow-up after HSCT:	
Mean (range)	17, 5 yrs (6–32)

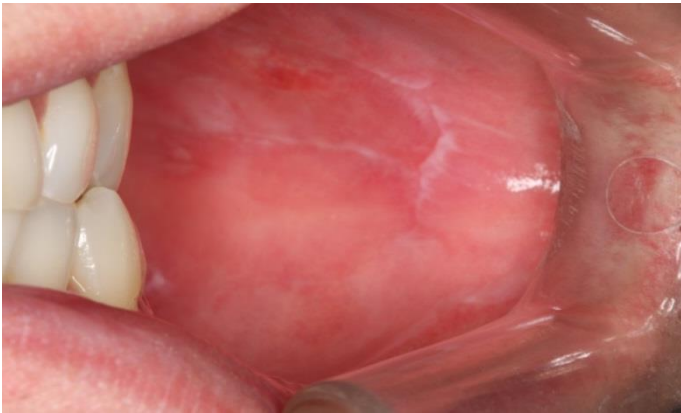
RESULTS

Oral symptoms and findings (n=100)

Lichen planus-like changes	23%
LTS with other distinctive signs and symptoms of chronic oral GvHD	21%
Xerostomia	17%
Mucocelles	3%
Mucosal atrophy	3%
Oral ulcers	1%

Treated before the age of 5 (n=18)

Dental developmental disturbances	14 (78%)
Microdontia	11 (61%)
Hypodontia	10 (56%)
Enamel hypoplasia	8 (44%)



Lichen planus-like changes



Dental developmental disturbances

CONCLUSIONS

The results indicate that although treated with conditioning regimen mainly based on chemotherapy and no total body irradiation, many LTS experience oral side effects after allogeneic HCST which may affect their oral health negatively.