

Oral Cavity Changes with High-Dose Chemotherapy as Documented in the Clinical Setting with the Oral Assessment Guide

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Background

- Oral cavity changes – frequent side effect
- Changes → pain
- Pain → difficult nutrition and communication
- Breakdown → risk life-threatening infections

Aim

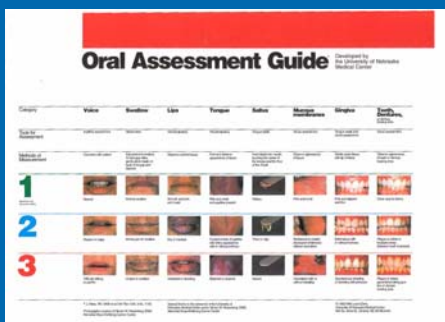
- To investigate changes in the oral cavity of individuals receiving high-dose chemotherapy (HDC) as documented by nursing assessments in the clinical setting using the Oral Assessment Guide (OAG)

Methods

- Institutional Review Board approval
- Retrospective chart review – part of larger study
- Sample – consecutive adults who had regular oral assessments during HDC
- Descriptive statistics

Instruments

- Oral Assessment Guide
 - Clear
 - Concise
 - Clinically useful
 - Able to provide data for research analysis
- Pain assessment – numerical rating scale
 - 0 = No pain
 - 10 = Worst pain



Use in Clinical Setting

- Scoring
 - 8 categories related to oral cavity
 - Assessment ratings 1 – 3
 - 1 = normal findings
 - 2 = changes, but not broken or loss of function
 - 3 = broken or loss of function
 - Total OAG score = sum of category ratings
- Assessment frequency – every shift (inpatient)
- Oral care frequency guided by the score on the OAG

Results

Sample

- Subjects age – 25-75 years (m=51.5 yrs)
- Assessments during acute phase
 - Over 8 – 28 days
 - 1078 shift scores
 - Peak OAG 10 - 23

Treatment

- High-Dose Chemotherapy
 - BEAM 54.8%
 - BCNU (Carmustine)* 300 mg/m²
 - *CCNU (Lomustine) for 2 subj
 - Etoposide 100 mg/m²
 - Cytarabine 100 mg/m²
 - Melphalan 140 mg/m²
 - BuCY 4.8%
 - Busulfan 8 mg/kg q 6 hr (16 doses)
 - Cyclophosphamide 60 mg/kg X2
 - Cy TBI 9.5%
 - Cyclophosphamide 60 mg/kg alBW
 - Total Body Irradiation (TBI) 200 cGY bid x 3day
 - Melphalan 31%
 - Melphalan 200 mg/m²

Pain Sites

- Mouth 14%
- Throat 25%
- Mouth/throat 21%
- Miscellaneous
 - Headache 15%
 - Epigastric/abdominal 5%
 - Generalized 1%
- Others 19%

OAG Oral Cavity Scores

Category Frequency / Percent

Category	Frequency / Percent
Voice	1 = 975/90.4 2 = 92/8.5 3 = 11/1.0
Lips	1 = 571/53.0 2 = 482/44.7 3 = 25/2.3
Saliva	1 = 666/61.8 2 = 389/36.0 3 = 23/2.1
Gingiva	1 = 966/89.6 2 = 101/9.4 3 = 11/1.0
Swallow	1 = 760/70.5 2 = 311/28.8 3 = 7/0.6
Tongue	1 = 569/52.8 2 = 471/43.7 3 = 38/3.5
Mucous membranes	1 = 645/59.8 2 = 368/34.1 3 = 65/6.0
Teeth	1 = 1031/95.6 2 = 44/4.1 3 = 3/0.3

Total Frequency / Percent

8 = 327/30.3
9 = 184/17.1
10 = 114/10.6
11 = 136/12.6
12 = 108/10.0
13 = 92/8.5
14 = 41/3.8
15 = 26/2.4
16 = 12/1.1
17 = 10/0.9
18 = 13/1.2
19 = 5/0.5
20 = 7/0.6
21 = 2/0.2
22 = 0/0.0
23 = 1/0.1
24 = 0/0.0

Pattern of Change

- Category rating of 1 → Category rating of 2
 - Lips first category to change
 - Tongue second category to change
- Change in category rating → 3
 - Mucous membranes first category to change

Level 3 Ratings

- Level 3 category ratings = breakdown/loss of function
 - 61.9% (n=26) subjects no level three ratings
 - 19.0% (n=8) subjects two level three ratings

Conclusions

- Mucositis and high-dose chemotherapy
 - Common problem
 - Painful experience
 - Potentially serious
 - Not universal
- Regular use of oral assessment clinical tool provides essential information to guide interventions



Partially funded by American Society
For Pain Management Nursing
Research Award

Future Consideration

- Changes in lips as early indicator of need for intervention
- Voice and swallow as surrogate for throat/esophagus changes
- Implementation of pain algorithm to prevent severe pain crisis
- Development of OAG score directed interventions