

Oral Pain and Discomfort in Community-Dwelling Older People – a Randomised 2-Year Intervention Study

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I have no potential conflict of interest to report

Introduction

- **Oral pain and discomfort may cause problems in eating, speaking and swallowing.**
- **The infection-free mouth with no pain or discomfort supports good everyday-life of the old people .**

Oral Health Intervention Study

- The study was a part of the larger **GeMS-study** (Geriatric Multidisciplinary Strategy for the Good Care for the Older people)
- The parent **GeMS-study**:
 - A multi-component, longitudinal intervention study conducted in the City of Kuopio, Finland, 2004–2007
 - The **aims** were:
 - to optimize medical treatment, medication and to improve and prevent decline in function and nutrition in **community-dwelling old people**

Aim of the current study

- To study, whether **oral health promoting interventions improve oral self-care and oral health** among community dwelling older people ≥ 75 years.

Oral health intervention

- **Oral health intervention included:**
 - **individually tailored instructions for oral and/or denture hygiene**
 - **relief of dry mouth symptoms**
 - **use of fluoride, xylitol, or antimicrobial products**
 - **professional cleaning**
- **The dental treatment was also given if needed**
- **In the control group, participants used dental care services after their own consideration**

Study design

- **Parent GeMS-study:**
 - Random sample of 1000 persons aged ≥ 75 years in the year 2003 (born before November the 1st 1927) and living in Kuopio
 - Intervention group n=500
 - Control group n=500
- **This Oral Health Intervention Study:**
 - The study group was the **intervention group** of the parent GeMS-study, divided into intervention and control groups.

Study population

- **At baseline** an interview and a clinical oral examination to community-dwelling participants:
 - $N_{\text{Total}} = 354/500$
 - $N = 186$ in the intervention group
 - $N = 168$ in the control group
- **At the end of the study**
 - $N_{\text{Total}} = 279 / 500$ (55.8%) participants completed the 2-year study
 - $N = 145$ in the intervention group ($N = 68$, 46.9% dentate)
 - $N = 134$ in the control group ($N = 80$, 59.7% dentate)

Baseline characteristics of the participants

- Mean age 81.6 years
- Women 75.8 %
- MMSE, high score 25-30, 78.2 %
- IADL, high score 8, 46.7 %
- Dentate 52.3 %, of which 20 teeth or more, 35.7 %
- **Gingivitis 58.1 %**
- **Presence of deepened periodontal pockets 58.8 %**
- Good oral hygiene (dentate) 33.3 %
- Removable dentures 76.9 %
- Denture stomatitis 20.2 %
- No unstimulated saliva flow 27 %

Self-reported oral pain and discomfort

| | Intervention group n=145 | Control group N= 134 |
|--------------------------|---|---------------------------------|
| Baseline | 31 % (n=45) | 22 % (n=30) |
| After 2 years | 21 % (n=30) | 18 % (n=24) |
| | Changes were not statistically significant | |

Self-reported main reasons for pain and discomfort

| | Intervention group, problems with | Control group, problems with |
|----------------------|--|--|
| Baseline | <ul style="list-style-type: none">• removable dentures, n=16• teeth/gingiva, n=13• mucosa/tongue, n=13 | <ul style="list-style-type: none">• removable dentures, n=7• teeth/gingiva, n=11• mucosa/tongue, n=6 |
| After 2 years | <ul style="list-style-type: none">• teeth/gingiva, n= 11• removable dentures, n=9• mucosa, n=5 | <ul style="list-style-type: none">• teeth/gingiva n=13• removable dentures, n= 7 |

Conclusions

- The interventions slightly decreased oral pain and discomfort but the changes were not statistically significant.
- **Oral problems were common**; in every fifth of the participants, despite intensive prevention, oral hygiene counselling and dental treatment.
- It is a big challenge to keep healthy and painless the mouth with heavily restored teeth, gingiva problems, worn-out dentures, thin mucosa and decreased saliva flow rate.

Considerations

- **In general, the oral pain and discomfort are likely widely underreported for many reasons, typical to the older people:**
 - **pain is a natural part of aging – also in the mouth (e.g. dry mouth)**
 - **due to adaptation to the discomfort situation (worn-out dentures on reduced alveolar bases)**
 - **it may be a challenge to go and get dental treatment**
 - **the treatment causes costs**

Thank you for your attention!

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