Statement from the HTA-centrum of Region Västra Götaland, Sweden

Psychological treatment of dental anxiety among adults

Method and patient category:
Severe dental anxiety (phobia) has substantial impact on a person’s life. Not only are individuals with dental anxiety at risk of deterioration of oral health, with pain and dysfunctions due to avoidance of dental care. The dental anxiety in itself may also impair their health related quality of life and lead to general anxiety, or to avoidance of social contacts. Therefore, reducing the dental anxiety is often just as important as treatment of the oral conditions. The standard treatments are pharmacological (sedation, general anesthesia) or psychological interventions. Treatment of patients with dental anxiety/phobia aims at reducing the levels of dental anxiety and to improve the oral status.

Question at issue:
Is behavioral therapy a more effective treatment for dental phobia or dental anxiety/fear, concerning reduction of dental anxiety and acceptance of conventional dental treatment, than information, pharmacological sedation, experience of dental treatment under general anesthesia or placebo/no treatment?

PICO (Patient, Intervention, Comparison, Outcome)

P = Adults (≥18 years) with dental phobia (according to DSM-IV or ICD-10) or severe dental anxiety (according to validated scales/instruments).
I = Behavioral therapy including cognitive behavioral therapy, exposure, systematic desensitization, or relaxation therapy.
C = Information, pharmacological sedation, general anesthesia or placebo/no treatment.
O = Level of dental anxiety/fear after intervention (measured with Dental Anxiety Scale [DAS] or Dental Fear Survey [DFS]), Acceptance of conventional (at least one occasion) dental treatment (without pharmacological sedation), Dental 'treatability' rating, Quality of life/Oral health related quality of life, Complications.

Level of evidence:
The systematic literature review identified ten publications of low or moderate quality, comprising seven different randomized controlled trials (RCTs).

Level of dental anxiety measured with validated scales (DAS/DFS)
After behavioral therapy a clinically relevant decrease in the level of dental anxiety (measured with DAS) was evident, both in comparison with general anesthesia/sedation and no treatment (5 RCTs). Follow-up studies comparing behavioral therapy with general anesthesia/sedation showed a sustained effect after 1-2 years.
Conclusion: There is some support that behavioral therapy gives a clinically relevant reduction of dental anxiety, measured with DAS. Low quality of evidence (GRADE ⊕⊕〇〇).
One trial demonstrated a statistically significant reduction in dental anxiety (measured with DFS), whereas another failed to do so.
Conclusion: There is insufficient support for the effect of behavioral therapy on dental anxiety, measured with DFS. Very low quality of evidence (GRADE ⊕〇〇〇).

Acceptance of conventional dental treatment (without sedation), dental 'treatability' rating
One RCT of moderate quality reported an increased acceptance rate of conventional dental treatment with behavioral therapy (80%) compared to general anesthesia (53%).
Conclusion: There is some support that behavioral therapy improves the acceptance of conventional dental treatment. The quality of evidence is low (GRADE ⊕⊕〇〇).
The risks of the studied treatment are not fully evaluated. All types of exposure based treatments may initially pose a risk of increased anxiety levels. Also dental treatment under general anesthesia is associated with certain medical risks, with an estimated mortality rate of <1:100,000 general anesthetic administrations.

The outcomes: *quality of life/oral health related quality of life and complications* were not measured in any study.

**Ethical aspects:**
Besides deterioration of oral health, dental anxiety may impair the health related quality of life, and lead to general anxiety, or to avoidance of social contacts. Therefore, it seems important to reduce the dental anxiety in itself, and not only focus on oral health related problems. All exposure based behavioral treatments pose a risk of increased anxiety, since the treatments are anxiety provoking. Dental treatments under general anesthesia or pharmacological sedation are also associated with certain medical risks.

**Economical aspects:**
Estimated cost per patient is 5,500 SEK for behavioral therapy, and 17,000 SEK for general anesthesia.

**Concluding remarks:**
Patients with severe dental anxiety avoid dental care, which may result in impaired quality of life and deterioration of oral health. Dental treatments under general anesthesia are costly and associated with certain medical risks. There is some support that behavioral therapy reduces dental anxiety more than general anesthesia/sedation or no treatment and improves acceptance of conventional dental treatment (GRADE ⊕⊕⊙⊙).

The Regional Health Technology Assessment Centre (HTA-centrum) of Region Västra Götaland, Sweden (VGR) has the task to make statements on HTA reports carried out in VGR. The statement should summarise the question at issue, level of evidence, efficacy, risks, and economical and ethical aspects of the particular health technology that has been assessed in the report.

The HTA was accomplished during the period of 2011-09-07—2012-04-25.

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On behalf of the HTA quality assurance group, in Region Västra Götaland, Göteborg, Sweden, 2012-04-25

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