

provide more assistance. If oral hygiene routines are established early, the patient may be less resistant to efforts to help. Autonomy should be encouraged as long as it is feasible. However, once the patient reaches the severe stage, oral hygiene is likely to be limited to what the caregivers provide. Resistance at this stage can be managed by having a second caregiver enter and deliver care as the first caregiver leaves or by distraction, such as singing or having the individual hold a favorite item.

Care Provided in Domiciliary and Institutional Settings

The physician who has diagnosed dementia and the dentist play vital roles in stimulating the patient's family members to provide domiciliary oral hygiene and in educating family members regarding how to provide appropriate daily oral hygiene care. Usually care provided in long-term institutions is poor. Although much research and debate have been expended looking for ways to fix this situation, no resolution has been achieved yet. Among the suggested ways to improve care are an effective training program for caregivers to provide oral hygiene for residents that lasts more than an hour or so coupled with the training of oral health 'champions' who are responsible for training their peers and supervising oral hygiene in the institutional setting. Administrative support that will enforce oral hygiene protocols is essential, and oral health outcomes should be included in each patient's therapeutic goals. Because of the high turnover among direct care workers in nursing homes, ongoing educational materials, including mobile phone apps and online courses, are important aids to help train new staff members.

DENTAL TREATMENT ASSESSMENT TOOL

The ROHD assessment teaching tool consists of a 10-question evaluation to guide the thought process of the oral health care provider through the tasks required. These include data gathering, risk assessment, and treatment planning for patients who have multiple complicating factors, which would include patients with Alzheimer's disease. Dentists are challenged to

check that all data are available before their analysis begins, which includes general health information, social support, and oral health conditions. Dentists then focus on the data most relevant for ROHD and treatment planning. The state that will result should nothing be done is also considered, as well as the patient's risk for ROHD. Treatment alternatives are evaluated, eventually leading to a choice of the best alternative for the patient and the justification for selecting this course of action. The dentist must then plan how to communicate with the patient and caregiver concerning the best treatment and maintenance plan. Finally, the dentist is challenged to determine the effectiveness of the plan and its relationship to the data on which it is based.

Clinical Significance

Oral health in patients with AD/DR is currently poor, leaving them vulnerable to ROHD and a poor quality of life. Primary care providers should refer newly diagnosed dementia patients to an oral health care provider so that oral health care plans can be formulated and put into place as early in the process as is possible. Each treatment plan must be customized to the patient's individual needs and disease stage if good outcomes are to be obtained. Future research into Alzheimer's disease may bring new and more effective treatment options forth that will prolong the highest quality of life for these patients.

Marchini L, Ettinger R, Caprio T, et al: Oral health care for patients with Alzheimer's disease: An update. *Spec Care Dentist* 39:262-273, 2019

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CRYOTHERAPY

Pain relief after third-molar surgery



BACKGROUND

Third-molar surgery is a common procedure undertaken by maxillofacial surgeons. Often the patients suffer pain, swelling, and trismus after this surgery, which can affect their daily function and quality of life. Nonsteroidal anti-inflammatory drugs

(NSAIDs) are widely used to manage postoperative pain and inflammation, but these agents are associated with a risk for gastrointestinal tract symptoms and cardiovascular events. Cryotherapy is used in oral and maxillofacial surgery to manage immediate postoperative inflammatory complications.

Numerous techniques have been suggested, including ice packs, ice massage, frozen gel packs, ice chips in a plastic bag or washcloth, or cold compression through a face mask. All reduce skin temperature, which leads to blood vessel vasoconstriction and reduced tissue metabolism, microvascular permeability, and nerve conduction velocity. The scientific evidence for the efficacy of these methods is anecdotal because of the lack of clinical studies. A systematic review and meta-analysis were conducted to assess the efficacy of cryotherapy for reducing pain, trismus, and facial swelling after third-molar surgery.

METHODS

Randomized controlled clinical trials (RCTs) were sought in a search of PubMed, Web of Science, SCOPUS, Cochrane Central Register of Controlled Trials, ClinicalTrials.gov, Google Scholar, and OpenThesis. The primary outcome sought was a reduction in postoperative pain, with secondary outcomes of relief of facial pain swelling and trismus. Six studies were identified, 4 of which were split-mouth or crossover RCTs and 2 of conventional parallel-group designs. A total of 231, mostly young adult patients were studied.

RESULTS

Five studies described the anti-inflammatory regimen used, which included the postoperative administration of ibuprofen, flurbiprofen, or nimesulide. Three studies used analgesics as rescue medication, and 4 included antimicrobial therapy with 0.2% chlorhexidine gluconate mouth rinse for 1 week postoperatively. Ice packs were applied on the side of the face where surgery had taken place for the first 24 to 48 hours after surgery.

Postoperative Pain

All studies investigated postoperative pain and employed a visual analog scale to measure this outcome. Pain in patients using cryotherapy was lower than in control patients. The differences between the pain intensity of the 2 groups were noted on the second and third postoperative days. Effect sizes were small to moderate.

Trismus and Swelling

Trismus and facial swelling were described in 5 studies. The degree of trismus was measured using maximum mouth opening. In 3 studies, mouth opening ability was a follow-up measurement; in 2, the magnitude of trismus was determined numerically by

subtracting each postoperative interincisal distance from the postoperative measurement.

Facial swelling was measured using various linear distances. The degree of swelling was determined by subtracting the preoperative facial size from the postoperative measurements.

Four RCTs assessed the effects of cryotherapy on trismus and facial swelling. None of these studies provided evidence to support the effectiveness of cryotherapy in reducing either trismus or facial swelling after third-molar surgery.

DISCUSSION

In the immediate postoperative period, many patients who undergo third-molar surgery will experience pain, trismus, and facial swelling. Clinical practice and physiological knowledge suggest that cryotherapy may have a role as adjuvant therapy for these patients. However, although cryotherapy was able to diminish the pain intensity for patients on the second and third days after surgery, the effect was only rated as small to moderate. In addition, no effect was found on trismus or facial swelling.

Clinical Significance

Cryotherapy may offer some relief from the pain experienced by patients after third-molar surgery. It does not seem to improve the experience of patients with trismus or facial swelling, however. Further high-quality RCTs would be useful in confirming these findings and perhaps indicating which method of cryotherapy is most effective for pain relief.

Do Nascimento-Júnior EM, dos Santos GMS, Mendes MLT, et al: Cryotherapy in reducing pain, trismus, and facial swelling after third-molar surgery: Systematic review and meta-analysis of randomized clinical trials. *J Am Dent Assoc* 150:269-277, 2019

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