Clinical Significance

Health professionals who deal with pregnant women should be made aware of the oral conditions likely to be seen in at least a tenth of their patients. Referring pregnant women to a dentist for care of oral lesions is an appropriate course of action.

Bett JVS, Batistella EÂ, Melo G, et al: Prevalence of oral mucosal disorders during pregnancy: A systematic review and meta-analysis. *J Oral Pathol Med* 48:270-277, 2019

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PRESCRIPTION DRUG MONITORING

State prescription drug monitoring programs

BACKGROUND

The effectiveness of nonsteroidal anti-inflammatory analgesics to manage postoperative dental pain has been supported by recent evidence. The American Dental Association (ADA) recommends that dentists consider nonsteroidal anti-inflammatory drugs as first-line therapy for acute pain, although opioids have been the traditional treatment in acute pain management. Most dental opioid prescriptions are for immediate-release medications, which have a high potential for abuse and diversion. In addition, some data suggest that dentists often prescribe more opioids than needed or recommended to manage acute post-procedural pain. The ADA also recommends that dentists register with and use their state's prescription drug monitoring programs (PDMPs), which are available in 49 states. These programs are designed to promote the appropriate use of controlled substances and deter misuse, abuse, and diversion by collecting data from pharmacies on dispensed controlled substances and making it available to authorized prescribers and dispensers. However, the rates of dentist registration with and use of the PDMPs are low. A survey of dentists' experience with state PDMPs and of the impact of registration and use of these databases on practice characteristics was undertaken.

METHODS

A cross-sectional survey was conducted among 805 practicing dentist members of the National Dental Practice-Based Research Network. The questions asked about prescribing practices for pain management and the implementation of risk mitigation strategies, including PDMP use.

RESULTS

A total of 375 (46.6%) of respondents reported never accessing their state PDMP. Reasons for not accessing the PDMP were lack of awareness of the program's existence and lack of knowledge about how to register with or access the program. Other reasons given included perceiving the process was too time-consuming, believing the information would not change their prescribing, concerns about the timeliness or accuracy of program data, and not knowing how to discuss the information with patients.

Most dentists who used the PDMP reported it was very helpful (58.1%) or somewhat helpful (31.6%), but 6% reported program use was not very helpful or not helpful at all. Just over 40% of the dentists reported program use usually did not change their intended prescribing behavior, 33.5% reported it kept them from prescribing an opioid, and 25.5% reported it led them to prescribe fewer doses of an opioid. Two dentists reported program use usually led them to prescribe more doses of opioids than initially intended.

DISCUSSION

Based on these findings, additional motivation is needed to encourage all dentists who prescribe opioids to register for and use their state opioid prescription monitoring programs. Future research is needed to determine how best to implement PDMP use in the dental office, with special focus on barriers to use, communicating findings with patients, customizing nonopioid alternatives to pain control, and integrating PDMP access into the existing clinical workflow using electronic dental record software.

Clinical Significance

Most of the dentists who used their PDMPs found them helpful, offering good information regarding the prescription of opioids. Unfortunately, many dentists still don't access these programs or believe that they will be useful. Additional education regarding the value of these programs should focus on barriers to their use, with the goal of overcoming these reasons for not accessing this tool.

McCauley JL, Gilbert GH, Cochran DL, et al: Prescription drug monitoring program use: National Dental PBRN results. *JDR Clin Translational Res* 4:178-186, 2019

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PULPOTOMY

Treatment of carious pulp exposures

BACKGROUND

About 2.5 billion people are affected annually with untreated decay in their permanent teeth. With deep caries and extensive restorative procedures that expose or nearly expose dental pulp, irreversible pulpitis usually results and is often accompanied by intermittent or continuous pain. Vital pulp therapy is undertaken to address this situation, achieving apical closure and root development in immature permanent teeth by preserving pulp tissue vitality. Bioactive medicaments are placed on exposed pulp in vital pulp therapy so that inflammation can be resolved and tissue formation fostered. Calcium hydroxide was the earliest of these medicaments; a more recent development is mineral trioxide aggregate (MTA). Drawbacks to MTA include tooth discoloration, long setting time, difficulty handling the material, and high cost. As a result of these drawbacks, more medicaments have been developed for use in pulpotomy of permanent teeth, such as calcium-enriched mixture (CEM) cement, platelet-rich fibrin, and Biodentine. A systematic review was undertaken to compare the efficacy and cost-effectiveness of pulpotomy and associated medicaments in saving permanent teeth that have pulp exposure caused by caries.

METHODS

The Embase, MEDLINE, Web of Science, Trip Pro, Cochrane Library, International Clinical Trials Registry Platform, and ClinicaTrials.gov databases were searched for randomized controlled trials (RCTs) offering comparisons of pulpotomy and various medicaments or 2 or more medicaments used in pulpotomy. Seventeen studies reported in 21 articles were identified that met the inclusion criteria for analysis. Four studies reported on pulpotomy and other treatment modalities and 13 compared pulpotomy using different medicaments.

RESULTS

Pulpotomy Versus Other Treatments

All of these studies were performed on mature permanent teeth that had carious pulp exposures. Three reported outcomes of the same trial at different follow-up times, and 2 reported outcomes at various time points of another trial. Three compared the efficacy of pulpotomy with that of root canal treatment, whereas 1 compared pulpotomy with direct pulp capping.

When intention-to-treat pairwise analyses were done, pulpotomy using calcium hydroxide had greater success as determined radiographically than direct pulp capping after 60 months. No differences in clinical, radiographic, or overall success after 12 months were found for comparisons of pulpotomy with CEM cement and root canal treatment or for pulpotomy using MTA and root canal treatment. None of the studies investigated the cost-effectiveness of the treatments.

Pulpotomy Using Various Medicaments

Five trials compared MTA and calcium hydroxide. A pooled analysis of the data on immature and mature permanent teeth from these trials was done using the intention-to-treat principle. MTA was associated with higher success rates on all parameters after 12 months and had higher overall and radiographic success rates at 24 months compared to calcium hydroxide. Clinical success rates were comparable at 24 months.

When type of tooth was used to stratify the data, intention-to-treat analysis showed MTA had higher clinical and overall success rates after 24 months than calcium hydroxide in mature permanent teeth. The 2 medicaments showed no differences in the other outcomes. In addition, immature permanent teeth demonstrated no difference between MTA and calcium hydroxide on any treatment outcome.

MTA and CEM cement were compared in immature permanent teeth and mature permanent teeth. Intention-to-treat pairwise analyses reported MTA had higher radiographic success rates at 24 months compared to the CEM cement in mature permanent teeth. None of the other outcomes differed between the 2 medicaments.

MTA was compared to platelet-rich fibrin in immature and permanent teeth, to calcium hydroxide and platelet-rich fibrin in