

Treatment Methods for Acute and Chronic Stages of Dental Caries: Prevention and Prescription

Ismoilova Umiya G'ayrat qizi

Termiz iqtisodiyot va servis universiteti Tibbiyot fakulteti

Stomatologiya yo'nalishi

umiyaismoilova2@gmail.com

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Abstract: Dental caries remains a prevalent issue worldwide, affecting individuals of all ages. This article discusses the treatment methods for both acute and chronic carious lesions, emphasizing modern therapeutic approaches. Additionally, it explores preventive measures and prescription-based interventions to mitigate the risk of caries progression. The article also highlights the importance of early diagnosis and patient education in preventing dental decay.

Keywords: dental caries, acute caries, chronic caries, treatment methods, prevention, prescription, oral health

Introduction: Dental caries is a major public health concern characterized by the demineralization of tooth enamel and dentin due to bacterial activity. The condition progresses through different stages, from an initial acute phase to a more established chronic phase. Proper diagnosis and timely treatment are essential to prevent complications and tooth loss. This article examines the treatment strategies for both acute and chronic caries and the role of prescription-based interventions in caries management.

Treatment Methods for Acute and Chronic Caries

Acute Caries Treatment:

Remineralization Therapy: The use of fluoride-based agents, calcium phosphate products, and casein phosphopeptide-amorphous calcium phosphate (CPP-ACP) for enamel repair.

Minimally Invasive Restorative Techniques: The application of resin infiltration and glass ionomer cement to restore early lesions.

Antimicrobial Treatments: Chlorhexidine mouthwashes and silver diamine fluoride (SDF) to halt bacterial progression.

Chronic Caries Treatment:

Restorative Dentistry: The removal of decayed tissue and restoration using composite resins, amalgam, or ceramic materials.

Endodontic Therapy: Root canal treatment for cases where the pulp is affected.

Extraction: In severe cases where tooth preservation is not feasible, extraction may be necessary, followed by prosthetic replacement.

Prescription-Based Interventions for Caries Management

Fluoride Supplements: Prescription-strength fluoride toothpaste and mouth rinses.

Antibacterial Agents: Chlorhexidine gels and varnishes to reduce bacterial load.

Dietary Supplements: Calcium and phosphate-based supplements to enhance remineralization.

Xylitol Products: Sugar substitutes to inhibit cariogenic bacteria.

Prevention of Dental Caries

Oral Hygiene Maintenance: Regular brushing with fluoride toothpaste and flossing.

Dietary Modifications: Reducing sugar intake and increasing water consumption. **Routine Dental Check-ups:** Professional cleaning and early detection of lesions.

Sealants and Protective Coatings: The application of dental sealants on occlusal surfaces to prevent caries formation. **Patient Education:** Encouraging awareness of oral health practices and caries risk factors.

Conclusion Dental caries, if left untreated, can lead to significant oral health complications. Effective management requires a combination of therapeutic interventions, prescription-based treatments, and preventive strategies. Emphasizing early detection and patient education can significantly reduce the prevalence of caries and improve overall oral health outcomes.

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