

1ST CLASS CAREER ACCORDING TO BLACK CLASSIFICATION

Arifova Farziyo O'tkirbek qizi ¹

¹ Andijan Branch of Kokand University

1st year student, group 24-05, department of "Dentistry", Faculty of Medicine

E-mail: farzonaaripovva@gmail.com

ARTICLE INFO

ABSTRACT:

ARTICLE HISTORY:

Received:13.03.2025

Revised: 14.03.2025

Accepted:15.03.2025

KEYWORDS:

Diagnostics,
Dentistry, treatment,
teeth, cheek, bacteria,
hygiene, mouth.

This article describes in detail the characteristics, causes, diagnostics, treatment methods and prevention of class 1 caries according to the Black classification. Class 1 caries occurs mainly on the chewing surfaces of molars and premolar teeth and on the posterior surfaces of the front teeth. The article discusses the main factors of caries development, modern diagnostic methods, as well as conservative and modern technologies used in the treatment of caries. The article also describes in detail the processes of restoration and filling of class 1 carious cavities, and indicates the materials used in dental practice and their advantages. This article provides useful information for dentists, medical students and people who care about oral health.

INTRODUCTION. One of the most effective systems for detecting and treating caries in dentistry is the Black classification. This system was developed in 1891 by the American dentist Greene Vardiman Black and is still widely used in dentistry today. The first class of the classification—Class 1 caries—includes damage that occurs in the natural fissures and pits of the teeth. Class 1 caries is characterized by the fact that it occurs mainly in the natural fissures on the chewing surfaces of molars and premolars. The main signs of this type of caries can be identified as follows: Areas of damage: Chewing surfaces (molars and premolars). The back surface of the front teeth (incisors or canines). Lingual (tongue side) and buccal (cheek side) pits.

The appearance is mainly divided into two: Color change: The damaged area usually appears as brown, dark or white spots. Depth of damage: In the initial stage, only the enamel layer is affected, but over time it passes into the dentin, causing pain. Since the

cracks and pits of the teeth are difficult to clean, bacteria accumulate in these areas, leading to the development of caries. Sweets and sticky products feed the bacteria and cause the formation of an acidic environment. Features of the tooth structure: Teeth that naturally have deep cracks are more likely to develop caries. Genetic predisposition: Weak enamel or lack of minerals can accelerate the development of caries. Diagnosis and Diagnosis To identify class 1 caries, dentists use the following diagnostic methods: Visual examination: Changes in color and the presence of black dots in cracks or pits are observed. Probing: Damaged areas are examined using a special dental probe. If the probe gets stuck or soft tissue is detected, this indicates the presence of caries. X-ray examination: Used to determine the depth of caries and whether it has reached the dentin. Laser diagnostics: A modern method that helps to determine the presence of hidden caries in the deep layers of the tooth.

Treatment methods The following steps are mainly performed in the treatment of class 1 caries:

Removal of damaged tissue:

The dentist removes the carious layer using a special bur or laser.

Tooth restoration: Composite filling materials: Help maintain the natural appearance of the tooth. Amalgam filling: Less commonly used, but more durable. Fissure sealing: As a preventive measure, cracks in molars are closed with special protective materials. Fluoride treatment: Used to strengthen enamel and prevent caries. Prevention (Prevention measures) To prevent class 1 caries, it is important to follow the following measures: Follow dental hygiene: Brush your teeth twice a day. Use dental floss and mouthwash. Control eating habits: Limit sweets and avoid sticky foods. Consume foods rich in calcium and phosphorus.

Regular dental checkups:

Visit the dentist every 6 months.

Sealing fissures:

Prophylactic fillings are recommended for children with deep fissures. Modern technologies are used in dentistry to treat class 1 caries: Air Abrasion: Removal of carious tissue using air flow. Ozone therapy: Ozone is used to destroy caries bacteria. Laser filling: The procedure is faster and more painless.

In conclusion, I can say that: Class 1 caries according to the Black classification is one of the most common problems in dentistry. Maintaining hygiene, undergoing regular preventive examinations and eating right are the most effective ways to prevent this caries.

With the help of new technologies, the treatment of class 1 caries is becoming not only effective, but also convenient and aesthetic. Restoration of Class 1 Carious Cavities in Dentistry Class 1 carious cavities according to Black's classification are caused by caries located on the chewing surfaces of molars and premolars, as well as in natural fissures and pits on the posterior surfaces of anterior teeth. Restoration of these types of cavities is important for restoring tooth functionality and preventing future damage.

The goal of restoring class 1 carious cavities is to restore chewing function. To maintain aesthetic appearance. To protect the remaining healthy tissue. To prevent caries recurrence. Restorative steps The restoration process of class 1 carious cavities involves several important steps: Diagnosis and Cavity Assessment Visual and probing examination: Used to determine the location, depth, and extent of the cavity. X-ray examination: Helps determine how deep the caries has penetrated the dentin. Laser or fluorescent diagnostics: Used to detect hidden caries. Anesthesia (Anesthesia) If the cavity is deep and has reached the dentin, local anesthesia is used. This is important to ensure patient comfort. Cavity Preparation Removal of carious tissue: The damaged layer is removed using a bur, laser, or air abrasive.

Healthy tissue is preserved to the maximum extent.

Cavity shaping:

The cavity is shaped to restore the natural anatomical structure of the tooth.

After the fissures and pits are maximally cleaned, the tissues are polished.

Isolation

A rubber dam is used to prevent moisture from entering the tooth. This ensures good adhesion of the fillings.

Filling The following materials are used to restore class 1 carious cavities:

Composite materials:

Provides a natural appearance of the tooth and are the best choice aesthetically.

Applied in layers in a well-lit environment, and each layer is polymerized with a special light.

Amalgam materials:

Highly durable, but less commonly used due to its aesthetic appearance.

Glass ionomer cement (GIC):

Releases fluoride and protects enamel and dentin. Usually used in children or for deep fissures.

Polymerization (Solidification)

=====

If a composite material is used, each layer is hardened using a special LED light. This increases the strength and durability of the material.

Restoring the chewing surface

After the restoration, the anatomical shape of the tooth is restored to restore chewing function.

Special carbon paper is used to check the tooth's compliance with the contact zone with other teeth.

Grinding and Polishing

The filling material is ground and the tooth surface is smoothed.

Polishing makes the surface of the material smooth, reducing the adhesion of bacteria. Advantages and disadvantages of materials used for restoration. Type of material Advantages Disadvantages

Composite material Aesthetic, natural appearance. Sensitive to moisture, somewhat expensive.

Amalgam Very durable, long-lasting. Aesthetically flawed.

Glass ionomer cement Releases fluoride and prevents caries. Relatively low durability. Possible errors during the restoration process

Incomplete cleaning of the cavity: If the carious tissue is not completely removed, recurrent caries may develop. Incorrect placement of the filling material: This can lead to discomfort during chewing or improper contact of the teeth.

Insufficient insulation: Moisture reduces the adhesion of the filling.

Recommendations for prevention and quality of restoration

Maintain hygiene: Brush and floss your teeth daily.

Dental check-ups: Visit your dentist every 6 months.

Sealing fissures: As a preventive measure, it is recommended to seal cracks with special fillings.

Fluoride products: Use products containing fluoride to strengthen teeth and prevent caries.

References:

1. Bakhtiyorovich, Ismonov Khurshidbek, and Ruziyev Nuriddin Mukhammadaliyevich. "Pairing, Their Own Aspects and Corresponding Methods of Work with Pairing in the Autocad Software." *International Journal on Orange Technologies* 3.12 (2021): 211-216.

2. qizi Abduraimova, Muazzamoy Abduqodir. "PERSPEKTIVA." *INTERNATIONAL CONFERENCES*. Vol. 1. No. 11. 2022.

3. Xurshidbek, Ismonov, Rustamov Umurzoq, and Abduraimova Muazzamoy. "MARKAZIY VA PARALLEL PROYEKSIYA ORTOGONAL PROYEKSIYALAR VA MODELNI KO 'RINISHLARI." *Educational Research in Universal Sciences* 1.4 (2022): 70-81.

4. Ismonov, Xurshidbek Baxtiyorovich, and Muazzamoy Abduqodir qizi Abduraimova. "ORTOGONAL PROYEKSIYALAR VA MODELNI KO 'RINISHLARI." *Educational Research in Universal Sciences* 1.3 (2022): 288-296.

5. Qizi, Abduraimova Muazzamoy Abduqodir. "PROJECTION AND AXONOMETRY."

6. [LIBRARY.ZIYONET.UZ](https://library.ziyonet.uz)

7. [Chat GPT](#)

