

Excessive Gingival Display: An Updated Review for Dentists, Clinical Pathologists, and Nursing

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Abstract

Excessive gingival display, commonly known as a "gummy smile," is an aesthetic concern characterized by the overexposure of maxillary gingiva during smiling. It can result from various factors, including vertical maxillary excess (VME), hypermobile upper lip, altered passive eruption, gingival hyperplasia, and dentoalveolar extrusion. The condition affects approximately 10% of individuals aged 20–30, with a higher prevalence in women. It can significantly impact self-esteem and psychological well-being, making accurate diagnosis and effective management essential. This review aims to provide an updated overview of the etiology, diagnosis, and treatment options for excessive gingival display, emphasizing the importance of a multidisciplinary approach to achieve optimal aesthetic and functional outcomes. A comprehensive evaluation, including medical history, facial and lip analysis, periodontal examination, and radiographic imaging, is essential for diagnosing the underlying cause of a gummy smile. Treatment modalities range from minimally invasive procedures, such as botulinum toxin and hyaluronic acid injections, to surgical interventions like gingivectomy, lip repositioning, and orthognathic surgery. Orthodontic treatment may also be employed in select cases. The prognosis for patients with a gummy smile is generally favorable, with most cases showing significant improvement following appropriate treatment. Less invasive options provide temporary results, while surgical interventions offer more permanent solutions. Accurate diagnosis and tailored treatment plans are critical for achieving satisfactory outcomes. Excessive gingival display is a multifactorial condition requiring a personalized treatment approach. Collaboration among dental professionals, including periodontists, orthodontists, and oral surgeons, is essential for effective management. Addressing both the clinical and psychological aspects of the condition enhances patient satisfaction and quality of life.

Keywords: *Gummy Smile, Excessive Gingival Display, Vertical Maxillary Excess, Altered Passive Eruption, Botulinum Toxin, Orthognathic Surgery, Lip Repositioning.*

Introduction

A moderate exposure of gingiva during a smile contributes to a youthful appearance and is considered aesthetically pleasing [1]. A gingival display of approximately 1 to 2 millimeters while smiling is generally regarded as within the normal range [2]. However, an excessive gingival display, commonly referred to as a "gummy smile," occurs when there is an overexposure of the maxillary gingiva during smiling (see Images. Excessive Gingival Display, Gummy Smile, Excessive Gingival Display, Overexposure of the Maxillary

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Gingiva). In more severe instances, the overexposure of gingival tissue may be noticeable even when the lips are at rest [1]. The management of a gummy smile hinges on accurately identifying its underlying cause, as this directly influences the treatment approach and prognosis. A gummy smile can arise from a variety of factors, such as a short or hypermobile upper lip, altered passive eruption, vertical maxillary excess (VME), dentoalveolar extrusion, and gingival hyperplasia. Among these, VME is frequently identified as one of the most prevalent causes [3]. To diagnose a gummy smile and determine its etiology, a comprehensive evaluation is required, including frontal and lateral facial analysis, static and dynamic lip analysis, assessment of the lip line, interlabial distance, and the display of incisors at rest, as well as a thorough periodontal examination. Additionally, oral radiographs and cephalometric analysis may be necessary, with the latter particularly useful for diagnosing VME [1].

Etiology

A gummy smile, characterized by excessive gingival display during smiling, is a condition with a multifactorial etiology, often involving the simultaneous presence of multiple contributing factors (see Image. Excessive Gingival Display, Multifactorial in Etiology). Accurate identification of the underlying cause is crucial for healthcare professionals, as the treatment approach varies significantly depending on the specific etiology [3][4]. Among the primary factors contributing to a gummy smile are a short upper lip, hypermobile upper lip, altered passive eruption, gingival hyperplasia, vertical maxillary excess (VME), and dentoalveolar extrusion. Each of these factors requires careful evaluation to ensure an appropriate and effective treatment plan. One of the most common causes of excessive gingival display is vertical maxillary excess (VME), which refers to the overgrowth of the maxillary bone in the vertical plane, resulting in an elongated appearance of the lower face [1]. This condition is typically diagnosed using cephalometric analysis, which helps confirm the presence of VME [1][3]. In cases of VME, the occlusal plane is positioned lower than expected, leading to an excessive gingival display. A distinctive feature of VME is the lower lip covering the incisal edges of the upper canines and premolars, which is almost pathognomonic for the disorder. Unlike cases of incisor overeruption, the anterior and posterior occlusal planes in VME continue without interruption. Interestingly, while the upper lip may appear clinically short in these cases, its length is usually within the normal range [1].

Another significant factor contributing to a gummy smile is altered passive eruption, a condition related to the natural process of tooth eruption. Tooth eruption occurs in two phases: an active phase, during which the tooth reaches its occlusal position, and a passive phase, where the gingival tissues migrate apically, exposing the crown [5]. Passive eruption progresses through four stages: 1) the junctional epithelium is located on the enamel, 2) the junctional epithelium is partially on the enamel and partially on the cementum apical to the cementoenamel junction (CEJ), 3) the junctional epithelium is entirely on the cementum with the base of the sulcus at the CEJ, and 4) stage 3 is accompanied by partial clinical exposure of the root [3]. An altered passive eruption occurs when the gingival tissues fail to migrate apically beyond stage 2, resulting in teeth that appear short and square due to the gingival tissues remaining coronal to the CEJ [5]. Diagnosing altered passive eruption involves ruling out a hypermobile lip and assessing the location of the CEJ and alveolar crest. The lips should be evaluated both at rest and during smiling. In cases of hyperactive lip movement, the translational movement from rest can measure up to 10 mm, whereas normal lip activity typically ranges between 6 and 8 mm [5]. In altered passive eruption, the CEJ may be located up to 10 mm apical to the free gingival margin [5]. The alveolar crest level, however, remains consistent with healthy conditions, positioned 1 to 2 mm apical to the CEJ [5]. Probing to the bone and the use of parallel radiographs are essential for determining the alveolar crest level [6][7][8].

Anterior dentoalveolar extrusion is another contributing factor to excessive gingival display. This condition involves the overeruption of the maxillary incisors, leading to a more coronal position of the gingival margins and resulting in a gummy smile [1]. Anterior dentoalveolar extrusion can be caused by tooth wear or an anterior deep bite. In cases of anterior tooth wear, compensatory overeruption of the incisors is often observed. Additionally, a discrepancy between the anterior and posterior occlusal planes is typically present in individuals with a deep bite [1]. In summary, a gummy smile is a complex condition with multiple potential causes, including VME, altered passive eruption, and anterior dentoalveolar extrusion. Accurate diagnosis through comprehensive clinical and radiographic evaluation is essential for determining the

appropriate treatment strategy. By addressing the specific underlying etiology, healthcare professionals can effectively manage and correct excessive gingival display, improving both functional and aesthetic outcomes for patients.

Epidemiology

Epidemiological studies indicate that approximately 10% of individuals aged between 20 and 30 years exhibit excessive gingival display, commonly referred to as a "gummy smile," with a higher prevalence observed among women compared to men [9][10]. This condition, characterized by the overexposure of the maxillary gingiva during smiling, tends to diminish with advancing age. The reduction in prevalence is primarily attributed to the natural aging process, which involves the gradual descent of both the upper and lower lips. This age-related change in lip position results in decreased exposure of the gingiva and maxillary incisors, thereby reducing the appearance of a gummy smile over time [11]. The higher prevalence of excessive gingival display in younger individuals, particularly women, may be linked to anatomical and physiological factors, such as lip length, mobility, and the vertical dimensions of the maxilla. As individuals age, the loss of skin elasticity and changes in soft tissue tone contribute to the lowering of the lips, which naturally limits the visibility of the gingiva during smiling. This age-related decline in gingival display underscores the dynamic nature of facial aesthetics and highlights the importance of considering age as a factor when diagnosing and managing a gummy smile. Understanding these epidemiological trends is essential for clinicians to provide age-appropriate treatment and to set realistic expectations for patients seeking corrective interventions.

History and Physical

Aesthetic smiles are characterized by specific features that contribute to their pleasing appearance. These include the visibility of at least the second premolars, minimal exposure of the upper gingiva, absence of gingival recession with healthy interdental papillae that fully fill the interdental spaces, and a lower lip line that is parallel to the incisal edges of the upper teeth and a virtual line connecting the contact points of these teeth [12]. Additionally, symmetrical between the anterior and posterior teeth, as well as teeth with proper form, position, color, and shade, are essential components of an attractive smile [12][1] (see Image. Lip Lines). The definition of a gummy smile varies among experts. Some authors describe it as the exposure of more than 3 to 4 mm of gingival tissue during a smile, while others consider more than 2 mm of gingival display to be excessive [13]. Generally, a gum-to-lip distance of 4 mm or greater during smiling is perceived as unattractive by dental professionals [14]. Once a patient is identified as having excessive gingival exposure, the next critical step is to determine the underlying cause of the condition. The etiology of a gummy smile can be attributed to various factors related to the lips, teeth, maxillary bone, and gingiva. Lip-related causes include a short upper lip or a hypermobile upper lip, which can result in increased gingival display during smiling. Dental factors such as dentoalveolar extrusion or altered passive eruption may also contribute to the condition. Maxillary bone abnormalities, particularly vertical maxillary excess (VME), are among the most common causes of excessive gingival exposure. Additionally, gingival hyperplasia, characterized by the overgrowth of gingival tissue, can lead to a gummy smile. A thorough evaluation of these factors is essential to establish an accurate diagnosis and develop an effective treatment plan tailored to the patient's specific needs.

Evaluation and Clinical Diagnosis

The evaluation of a gummy smile involves a comprehensive assessment of the patient's medical history, facial structure, lip dynamics, tooth display, and periodontal health. This systematic approach helps identify the underlying etiology and guides the development of an appropriate treatment plan.

Medical History

The patient's age is a critical factor in the evaluation, as it provides insight into the eruptive stage of the dentition, which is essential for diagnosing conditions such as altered passive eruption. Additionally, a detailed medical history can reveal potential causes of gingival hyperplasia, such as the use of

anticonvulsants, calcium channel blockers, or immunosuppressive drugs, particularly in patients who have undergone organ transplantation. These medications are known to contribute to gingival overgrowth, which may exacerbate a gummy smile.

Facial Analysis

A thorough facial analysis is conducted in both the frontal and lateral planes to identify any skeletal or soft tissue anomalies. Vertical maxillary excess (VME), one of the most common causes of a gummy smile, is often associated with a skeletal class 2 relationship. This evaluation helps determine whether the excessive gingival display is due to skeletal discrepancies, which may require orthognathic surgery or other skeletal interventions [3].

Lip Analysis (Static and Dynamic)

Lip-related factors are a significant contributor to a gummy smile. These include a short upper lip, a hypermobile lip, or a combination of both. The upper lip length is measured from the subnasale to the upper lip stomion (the lower border of the upper lip). In young adults, the average upper lip length ranges from 20 to 24 mm, increasing with age. A measurement of less than 20 mm is considered a short lip and is often associated with lip incompetence and excessive gingival display [5] (see Image. Upper Lip Length Measurement). A hypermobile or hyperactive lip results from increased activity of the upper lip elevator muscles, particularly the levator labii superioris, during smiling. This hyperactivity elevates the upper lip higher than normal, exposing more of the teeth and gingival tissues and contributing to a gummy smile [1][3].

Display of the Upper Central Incisors at Rest

The amount of upper central incisor visible at rest is another important parameter. In young women, the ideal display is 3 to 4 mm, while in young men, it is approximately 2 mm. This measurement tends to decrease with age due to the natural descent of the lips [11].

Interlabial Distance at Rest

The interlabial distance at rest, which normally ranges from 0 to 4 mm, is evaluated to identify discrepancies. An increased interlabial gap may result from a short upper lip, dentoalveolar extrusion, or VME. Clinicians must determine the specific cause to tailor the treatment accordingly [3][5].

Smile Line

The smile line, defined as the position of the upper lip relative to the upper incisors and gingiva during a natural full smile, is a key aesthetic consideration. A standard smile line reveals 75% to 100% of the crowns along with the interproximal gingiva. A low smile line, typically more common in men, shows less than 75% of the crown, while a high smile line (gummy smile), more common in women, exposes the entire crown and an excessive amount of gingiva [1][15].

Periodontal Examination

A detailed periodontal examination is essential to assess the health and dimensions of the gingival tissues. This includes measuring the width and thickness of the attached gingiva, evaluating the clinical and attachment levels, determining the crestal bone level relative to the cemento-enamel junction (CEJ), and recording probing depths. A clinically short tooth appearance may result from gingivitis, gingival hyperplasia, altered passive eruption, or tooth wear. The periodontal examination helps differentiate these conditions and identify the specific cause of the gummy smile [1][5]. In conclusion, the evaluation of a gummy smile requires a multidisciplinary approach, incorporating medical history, facial and lip analysis, tooth display assessment, and periodontal examination. This comprehensive evaluation ensures an accurate

diagnosis and facilitates the development of a targeted treatment plan to address the underlying etiology and achieve optimal aesthetic and functional outcomes.

Treatment and Management

The management of a gummy smile involves a variety of treatment modalities, each tailored to address the specific underlying etiology of the condition. Accurate diagnosis is crucial, as the treatment approach varies depending on the cause, which may include factors such as vertical maxillary excess (VME), hypermobile lips, altered passive eruption, or gingival hyperplasia. In some cases, a combination of factors may contribute to the condition, necessitating a multifaceted treatment plan. Treatment options range from minimally invasive procedures, such as botulinum toxin and hyaluronic acid injections, to surgical interventions like gingivectomy, modified lip repositioning, and orthognathic surgery. Orthodontic treatment may also be sufficient in certain cases to resolve excessive gingival display. The choice of treatment depends on the severity of the condition, patient preferences, and the clinician's expertise.

Gingivectomy

Gingivectomy is a surgical procedure aimed at crown lengthening, which involves the removal of excess gingival tissue and, in some cases, bone resection to reposition the attachment apparatus. This procedure is particularly effective in cases where the gummy smile is caused by excessive gingival tissue. The decision to perform a gingivectomy alone or in combination with osseous resection depends on the biological width and the relationship between the gingival crest and the underlying bone. If the osseous levels are adequate and the gingival tissue measures more than 3 mm from the bone to the gingival crest, a gingivectomy alone may suffice. However, if the osseous level is close to the cementoenamel junction (CEJ), a full-thickness periodontal flap with osteotomy is required to avoid disrupting the biologic width [16][17].

Lip Repositioning Surgery

Lip repositioning surgery is a technique designed to reduce gingival display by limiting the upward movement of the upper lip during smiling. This procedure involves the removal of a strip of mucosa from the labial vestibule and the creation of a partial-thickness flap between the mucogingival junction and the upper lip muscles. The lip mucosa is then sutured to the mucogingival line, effectively reducing the pull of the lip elevator muscles. This technique is particularly indicated for cases of mild VME or hypermobile upper lips. It is also suitable for addressing a short upper lip of non-skeletal origin. However, it is contraindicated in patients with severe VME or insufficient attached gingiva. The procedure can be performed using electrocautery, laser, or a scalpel, depending on the clinician's preference and expertise [5][17][18].

Hyaluronic Acid Infiltration

Hyaluronic acid infiltration is a relatively novel and minimally invasive technique for managing a gummy smile caused by hyperactive lip muscles. This procedure involves injecting hyaluronic acid into the paranasal region to compress the lateral fibers of the levator labii superioris alaeque nasi (LLSAN) muscle, thereby reducing its motility and limiting the elevation of the upper lip during smiling. The injection is typically administered at the most cranial part of the nasolabial fold, approximately 3 mm lateral to the alar cartilage. This technique offers a viable alternative to botulinum toxin injections, particularly for patients seeking a non-surgical solution. However, it requires a skilled injector with a thorough understanding of facial anatomy, as the injection site is in a highly vascular area [4].

Botulinum Toxin an Injection

Botulinum toxin A (Botox) is another minimally invasive option for treating a gummy smile caused by hyperactive lip muscles. The toxin works by inhibiting the presynaptic release of acetylcholine at the neuromuscular junction, leading to temporary muscle paralysis. For gummy smile correction, the toxin is injected into the levator labii superioris alaeque nasi (LLSAN) and levator labii superioris muscles on both

sides of the face. Typically, 4 to 6 units of botulinum toxin are injected at specific points: 2 mm lateral to the alar-facial groove, 2 mm lateral to the first injection point in the same horizontal plane, and 2 mm inferior between the first two sites. This treatment is effective in reducing excessive gingival display but requires periodic reinjections to maintain the results [5][19].

Orthognathic Surgery

In severe cases of vertical maxillary excess (VME), orthognathic surgery may be the only viable treatment option. This surgical approach involves procedures such as LeFort I osteotomy or combined maxillo-mandibular repositioning, which may include LeFort osteotomy and Obwegeser mandibular osteotomy. These surgeries are often accompanied by orthodontic treatment to achieve optimal functional and aesthetic outcomes. Orthognathic surgery is reserved for cases where skeletal discrepancies are the primary cause of the gummy smile, as it carries higher morbidity rates and requires hospitalization [4].

Orthodontic Treatment

In some cases, orthodontic treatment alone may be sufficient to address a gummy smile, particularly when the condition is caused by dentoalveolar extrusion or other dental malpositions. Orthodontic interventions can help reposition the teeth and improve the relationship between the teeth, gingiva, and lips, thereby reducing excessive gingival display. In conclusion, the treatment of a gummy smile requires a personalized approach based on the underlying etiology. Less invasive options, such as botulinum toxin and hyaluronic acid injections, are suitable for mild cases or patients seeking non-surgical solutions. Surgical interventions, including gingivectomy, lip repositioning, and orthognathic surgery, are reserved for more severe cases or when skeletal discrepancies are involved. A thorough evaluation and accurate diagnosis are essential to determine the most appropriate treatment plan and achieve optimal aesthetic and functional outcomes.

Differential Diagnosis

The excessive gingival display, commonly referred to as a "gummy smile," does not have a differential diagnosis, as it is a clinical presentation rather than a distinct condition. However, it is crucial to differentiate between the various underlying causes that contribute to the overexposure of gingival tissue during smiling. Identifying the specific etiology is essential for determining the appropriate treatment approach. The primary conditions that can lead to excessive gingival display include vertical maxillary excess (VME), hypermobile upper lip, altered passive eruption, gingival hyperplasia, dentoalveolar extrusion, and a short upper lip. Each of these conditions presents with distinct clinical features and requires a tailored management strategy. Vertical maxillary excess (VME) is characterized by an overgrowth of the maxillary bone in the vertical plane, resulting in an elongated lower facial appearance and excessive gingival display. A hypermobile upper lip, caused by increased activity of the lip elevator muscles, can also lead to a gummy smile by elevating the lip higher than normal during smiling. An altered passive eruption occurs when the gingival tissues fail to migrate apically during tooth eruption, leaving the teeth appearing short and square due to excessive gingival coverage. Gingival hyperplasia, often associated with certain medications or systemic conditions, involves the overgrowth of gingival tissue, contributing to a gummy smile. Dentoalveolar extrusion, characterized by the overeruption of maxillary incisors, and a short upper lip, which exposes more gingiva during smiling, are additional factors that must be considered. Accurate diagnosis of these underlying conditions is critical for effective treatment planning and achieving optimal aesthetic and functional outcomes.

Prognosis

The prognosis for individuals with a gummy smile is generally favorable, as most cases can be significantly improved with the available treatment options. However, the extent of reduction in gingival display and the longevity of the results depend on the underlying cause of the condition. Less invasive treatments, such as botulinum toxin (Botox) injections and hyaluronic acid infiltration, offer temporary but effective solutions for cases caused by hyperactive lip muscles or mild soft tissue discrepancies. These procedures typically provide noticeable improvements for several months, after which repeat treatments may be necessary to

maintain the results. While these non-surgical options are ideal for patients seeking minimal intervention, they are not suitable for all cases, particularly those involving skeletal or structural abnormalities. For more severe or complex cases, surgical interventions such as gingivectomy, lip repositioning surgery, or orthognathic surgery may be required. These procedures often yield permanent or long-lasting results by addressing the root cause of the excessive gingival display, such as vertical maxillary excess (VME), altered passive eruption, or significant soft tissue discrepancies. Orthodontic treatment may also be effective in cases where dental malpositions contribute to the condition. The success of these treatments depends on accurate diagnosis, proper patient selection, and the clinician's expertise. Overall, with appropriate management, most patients can achieve significant improvement in their smile aesthetics, enhancing both their appearance and self-confidence.

Complications

An excessive gingival display, commonly referred to as a "gummy smile," is primarily an aesthetic concern, but it can have significant psychological and emotional implications for patients. The condition often interferes with self-esteem and overall psychological well-being, as individuals may feel self-conscious about their appearance. Many patients with gummy smiles experience embarrassment or dissatisfaction with their smile, leading them to avoid smiling openly or to consciously control their lip movements to hide the excessive gingival exposure. This behavior can negatively impact social interactions, self-confidence, and quality of life. In some cases, the psychological burden of a gummy smile may even contribute to anxiety or social withdrawal. Addressing the condition through appropriate treatment not only improves aesthetic outcomes but also helps restore patients' confidence and emotional well-being, enabling them to smile freely and without hesitation [17].

Patient Education

Excessive gingival display, commonly referred to as a "gummy smile," is primarily regarded as an aesthetic concern rather than a functional or medical issue. However, it can significantly impact a patient's self-esteem and psychological well-being, making effective patient education a critical component of the management process. Patients should be informed that the treatment approach is determined by the underlying cause of the excessive gingival display, which may include factors such as vertical maxillary excess (VME), hypermobile upper lip, altered passive eruption, gingival hyperplasia, or dentoalveolar extrusion. Each of these etiologies requires a specific treatment strategy, ranging from minimally invasive procedures like botulinum toxin injections or hyaluronic acid infiltration to more invasive surgical interventions such as gingivectomy, lip repositioning surgery, or orthognathic surgery. Managing patient expectations is essential to ensure satisfaction with the treatment outcomes. Patients should be made aware that the extent of improvement and the longevity of results depend on the severity of the condition and the chosen treatment modality. For instance, non-surgical treatments like botulinum toxin injections provide temporary results that last several months, while surgical options may offer more permanent solutions. Additionally, patients must be educated about the potential complications associated with each treatment, such as infection, scarring, or temporary muscle weakness, and the importance of adhering to post-treatment care instructions. Obtaining informed consent is a crucial step, as it ensures that patients fully understand the risks, benefits, and limitations of the proposed treatment plan. By providing comprehensive education, clinicians can empower patients to make informed decisions and foster realistic expectations, ultimately enhancing their overall satisfaction and quality of life.

Enhancing Outcomes

An attractive smile is the result of a harmonious balance between the teeth, the amount of gingival display, and the framing of the lips during smiling [20]. Dental professionals must recognize the significant role that gingival display plays in achieving an aesthetically pleasing smile. Excessive gingival display, or a "gummy smile," can detract from this harmony and often requires a collaborative approach to diagnosis and treatment. While general dentists are typically the first point of contact for patients with this concern, managing complex cases often necessitates the involvement of an interprofessional team of specialists. This team may include periodontists, oral surgeons, orthodontists, and oral and maxillofacial surgeons,

depending on the underlying cause of the condition. The success of treatment for a gummy smile depends on accurately identifying its etiology, which can range from vertical maxillary excess (VME) and hypermobile lips to altered passive eruption or gingival hyperplasia. For optimal outcomes, timely consultation with a multidisciplinary team is recommended. Periodontists can address gingival overgrowth or altered passive eruption through procedures like gingivectomy, while orthodontists can manage dental malpositions or dentoalveolar extrusion. Oral and maxillofacial surgeons are essential for cases involving skeletal discrepancies, such as VME, which may require orthognathic surgery. Collaboration among these specialists ensures a comprehensive treatment plan tailored to the patient's specific needs. Effective communication and coordination within the interprofessional team are critical to enhancing healthcare outcomes. By leveraging the expertise of each specialist, clinicians can provide patients with the most effective and minimally invasive treatment options, ultimately improving both functional and aesthetic results. This collaborative approach not only addresses the clinical aspects of a gummy smile but also enhances patient satisfaction and quality of life [20][21].

Role of Nursing Interventions

Nursing interventions play a vital role in the comprehensive care of patients with excessive gingival display, commonly referred to as a "gummy smile." While the condition is primarily managed by dental and surgical professionals, nurses contribute significantly to patient education, preoperative and postoperative care, and overall patient support. Their involvement ensures a holistic approach to treatment, addressing both the clinical and emotional needs of patients. One of the primary roles of nurses is patient education. Nurses help patients understand the nature of their condition, the available treatment options, and the expected outcomes. They explain the procedures, potential risks, and benefits, ensuring that patients are well-informed and can provide informed consent. This is particularly important for patients considering surgical interventions, such as gingivectomy or orthognathic surgery, as it helps alleviate anxiety and sets realistic expectations. Nurses also provide guidance on preoperative preparations, such as fasting requirements or medication adjustments, and postoperative care instructions, including oral hygiene practices and wound management. In the preoperative phase, nurses assist in preparing patients for surgery by conducting assessments, monitoring vital signs, and ensuring that all necessary documentation and consents are in place. They also address any last-minute concerns or questions, providing reassurance and emotional support. During the procedure, nurses may assist the surgical team by maintaining a sterile environment, managing equipment, and monitoring the patient's condition. Postoperative care is another critical area where nursing interventions are essential. Nurses monitor patients for complications such as bleeding, infection, or adverse reactions to anesthesia. They provide pain management, administer prescribed medications, and offer guidance on dietary restrictions and oral care to promote healing. For patients undergoing less invasive treatments, such as botulinum toxin or hyaluronic acid injections, nurses may assist with the procedure and provide aftercare instructions to minimize side effects like swelling or bruising. Beyond clinical care, nurses play a key role in addressing the psychological impact of a gummy smile. They offer emotional support, helping patients cope with self-esteem issues or anxiety related to their appearance. By fostering a compassionate and supportive environment, nurses contribute to the overall well-being of patients, enhancing their satisfaction with the treatment process and outcomes. In summary, nursing interventions are integral to the multidisciplinary management of excessive gingival display. Through education, clinical support, and emotional care, nurses ensure that patients receive comprehensive and patient-centered care, ultimately improving both functional and aesthetic outcomes.

Conclusion

Excessive gingival display, or a "gummy smile," is a multifactorial condition that can significantly impact an individual's self-esteem and psychological well-being. This review highlights the importance of a comprehensive diagnostic approach to identify the underlying etiology, which may include vertical maxillary excess (VME), hypermobile upper lip, altered passive eruption, gingival hyperplasia, or dentoalveolar extrusion. Accurate diagnosis is critical, as the treatment strategy varies depending on the specific cause. A multidisciplinary approach involving periodontists, orthodontists, oral surgeons, and other dental professionals is essential for effective management. The treatment options for a gummy smile range from

minimally invasive procedures, such as botulinum toxin and hyaluronic acid injections, to more invasive surgical interventions like gingivectomy, lip repositioning, and orthognathic surgery. Botulinum toxin and hyaluronic acid injections are effective for cases caused by hyperactive lip muscles, providing temporary but noticeable improvements. Surgical options, such as gingivectomy and lip repositioning, are suitable for addressing excessive gingival tissue or hypermobile lips, while orthognathic surgery is reserved for severe skeletal discrepancies like VME. Orthodontic treatment may also be employed to correct dental malpositions contributing to the condition. The prognosis for patients with a gummy smile is generally favorable, with most cases showing significant improvement following appropriate treatment. However, the longevity of results depends on the chosen treatment modality. Less invasive options require periodic reinjections, while surgical interventions often provide permanent solutions. Patient education plays a crucial role in managing expectations and ensuring satisfaction with treatment outcomes. Clinicians must inform patients about the potential risks, benefits, and limitations of each treatment option, as well as the importance of adhering to postoperative care instructions. In addition to clinical management, addressing the psychological impact of a gummy smile is essential. Many patients experience embarrassment or anxiety related to their appearance, which can affect their social interactions and quality of life. By providing compassionate care and emotional support, healthcare professionals can help patients regain confidence and achieve a more harmonious smile. In conclusion, excessive gingival display is a complex condition that requires a personalized and multidisciplinary approach to treatment. By leveraging the expertise of various dental specialists and addressing both the clinical and emotional aspects of the condition, clinicians can achieve optimal aesthetic and functional outcomes, ultimately enhancing patient satisfaction and well-being.

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العرض المفرط للثة: مراجعة محدثة لأطباء الأسنان، أخصائيي الأمراض السريرية، والتمريض

الملخص:

الخلفية: العرض المفرط للثة، المعروف باسم "الابتسامة اللثوية"، هو مشكلة جمالية تتمثل في ظهور كمية كبيرة من اللثة العلوية أثناء الابتسامة. يمكن أن ينتج عن عوامل متعددة، بما في ذلك زيادة النمو الرأسي للفك العلوي (VME)، الشفة العلوية المفرطة الحركة، الانبثاق السلبي المتغير، تضخم اللثة، وبروز الأسنان السنخي. تؤثر هذه الحالة على حوالي 10% من الأفراد الذين تتراوح أعمارهم بين 20 و30 عامًا، مع انتشار أعلى بين النساء. يمكن أن تؤثر بشكل كبير على الثقة بالنفس والصحة النفسية، مما يجعل التشخيص الدقيق والإدارة الفعالة أمرًا ضروريًا.

الهدف: تهدف هذه المراجعة إلى تقديم نظرة عامة محدثة حول أسباب، تشخيص، وخيارات علاج العرض المفرط للثة، مع التأكيد على أهمية اتباع نهج متعدد التخصصات لتحقيق نتائج جمالية ووظيفية مثالية.

الطرق: يعد التقييم الشامل، الذي يشمل التاريخ الطبي، تحليل الوجه والشفة، الفحص اللثوي، والتصوير الإشعاعي، أمرًا ضروريًا لتشخيص السبب الكامن وراء الابتسامة اللثوية. تتراوح خيارات العلاج من الإجراءات طفيفة التوغل، مثل حقن البوتوكس وحمل الهيالورونيك، إلى التدخلات الجراحية مثل استئصال اللثة، إعادة وضع الشفة، وجراحة الفك التقويمية. يمكن أيضًا استخدام العلاج التقويمي في حالات محددة.

النتائج: إن تشخيص المرضى الذين يعانون من الابتسامة اللثوية يكون بشكل عام إيجابيًا، حيث تظهر معظم الحالات تحسنًا ملحوظًا بعد العلاج المناسب. توفر الخيارات الأقل توغلًا نتائج مؤقتة، بينما توفر التدخلات الجراحية حلولًا أكثر ديمومة. يعد التشخيص الدقيق وخطط العلاج المخصصة أمرًا بالغ الأهمية لتحقيق نتائج مرضية.

الاستنتاج: العرض المفرط للثة هو حالة متعددة العوامل تتطلب نهجًا علاجيًا شخصيًا. يعد التعاون بين أخصائيي طب الأسنان، بما في ذلك أطباء اللثة، أخصائيي التقويم، وجراحي الفم، أمرًا ضروريًا للإدارة الفعالة. معالجة الجوانب السريرية والنفسية للحالة يعزز رضا المرضى ونوعية حياتهم.

الكلمات المفتاحية: الابتسامة اللثوية، العرض المفرط للثة، زيادة النمو الرأسي للفك العلوي، الانبثاق السلبي المتغير، البوتوكس، جراحة الفك التقويمية، إعادة وضع الشفة.