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A Comprehensive Review Of Literatureon Gingivalenlargement

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Abstract

In clinical periodontics, gingival hypertrophy is a common clinical manifestation. Various unpleasant stimuli, such as offending medicines, hormones, plaque, and nutritional inadequacies, cause the gingiva to respond. The importance of early diagnosis and treatment cannot be overstated. In order to arrive at a solid diagnosis, a physician must be cautious while diagnosing these illnesses and ensure that all differential diagnoses are ruled out. This review of the literature focuses on the clinical manifestations of several forms of gingival enlargements.

Keywords: gingiva, enlargement, drug-induced overgrowth, hyperplasia, inflammation

I. Introduction

Gingival enlargement, also known as gingival hyperplasia or hypertrophy, is a condition in which the size of the gingiva increases. Enlargements can be classified as inflammatory, drug-induced, those related with systemic illnesses or diseases, malignant, or fake enlargements, depending on the etiopathogenesis. Enlargements can be marginal, papillary, or widespread, depending on their position. The enlargements might be localised or generalised depending on the distribution. Several indices for identifying or assessing gingival hypertrophy have been presented. [1-3]

Clinically, the most prevalent types of enlargements are inflammatory and drug-induced. A proper history taking along with clinical examination is of prime importance for correct diagnosis and timely treatment of the disease.

II. Clinical presentation

Epulis, or solitary/discrete, pedunculated or sessile swellings of the gingiva, refers to any solitary/discrete, pedunculated or sessile swellings of the gingiva with no histologic characterisation of a specific lesion.

Fibrous epulis/peripheral fibroma

This lesion most commonly manifests in adults as a solid, pink mass that arises from below the free gingival margin/interdental papilla. The lesion is usually painless. Secondary trauma, like as brushing, flossing, or chewing, might cause pain. The fibroma may include additional

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calcification foci (peripheral calcifying fibroma), cementicles foci (peripheral cementifying fibroma), or bone trabeculae (peripheral ossifying fibroma) on histology.[1]

Angiogranuloma/pyogenic granuloma

It appears in adults as a smooth, ulcerated mass that arises from beneath the gingival edge. The reddish/bluish mass is densely vascular, compressible, and prone to bleeding. They usually grow quickly for the first several weeks and then slowly after that. The mass may enter between the teeth and appear as a bilobular (buccal and lingual) mass joined by the col region. Pregnancy epulis/tumour or granuloma gravidarum refers to angiogranuloma that occurs during pregnancy. The stratified squamous epithelium is thickened, with prominent rete pegs and some intracellular and extracellular oedema, significant intercellular bridges, and leukocytic infiltration on histological examination. [2,3]

Peripheral giant cell granuloma

They are more common in the front portion of young patients' mouths, as well as in the posterior mouth during the mixed dentition phase and in adults. They're aggressive lesions with a lot of room for growth. Because of their purplish-red colour and proclivity to bleed, these lesions have a high vascularity.[3] They also have a proclivity for penetrating between teeth, resulting in nearby bone degradation and tooth separation.

Gingival cysts

Gingival cysts are a rare type of odontogenic cyst. They are most common among women in their 50s and 60s. Its radiolucency can occasionally be mistaken for a lateral periodontal cyst on radiographs. The best treatment for these lesions is excisional biopsy.

Neoplasticenlargement

The benign or malignant nature of isolated epulis-like lesions can also be determined. Fibroma, peripheral giant cell granuloma, central giant cell granuloma, papilloma, leukoplakia, nevus, myoblastoma, hemangioma, neurilemoma, neurofibroma, and ameloblastoma are some examples of benign masses. Squamous cell carcinoma or melanoma are examples of malignant tumours. Kaposi's sarcoma is the most frequent sarcoma, while fibrosacroma, lymphosarcoma, and reticulum cell sarcoma are uncommon.

III. Characteristic Features of Generalized Gingival Enlargement

More commonly, gingival disease manifests as regional or generalized gingival enlargement, which might fall into one of the different types.

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Inflammatory gingival enlargement

These are signs of an inflammatory reaction to a local irritation in the gingiva. Microbial deposits (plaque and calculus), cracked teeth, overhanging restorations, ill-fitting prostheses, orthodontic brackets, and so on could all be irritants. [4] Depending on the location of the irritant, the presentation begins with a small inflating of the papilla or marginal gingiva. The bulge may grow in size and extent over time, eventually becoming widespread. They may seem bluish or deep red in clinical settings. [5] They're usually friable and soft, with a smooth, shiny surface that bleeds easily. Chronic inflammatory enlargement can sometimes take the form of a hard, robust, pink, and fibrotic protrusion.[6]

Gingival enlargement in mouth breathers

The specific process of expansion in mouth breathers is unknown, despite the fact that it is thought to be inflammatory. It's supposed to be caused by the gingival surface's alternate soaking and drying. With a diffuse shining surface, the gingiva appears red and edematous. The presence of considerable enlargement in the maxillary and mandibular anterior regions with no involvement of the posteriors is a diagnostic hallmark of this type of enlargement. The palatal aspect of the maxillary anteriors and the labial aspect of the mandibular anteriors will be enlarged in a typical bimaxillary protrusion situation. Patients may have a mouth breathing habit as a result of a small upper lip, hyperactive labiisuperioris, proclination, rhinitis, etc.[1,3]

Drug induced gingival enlargement

Drug-induced gingival enlargement (DIGO) caused by immunosuppressive agents like cyclosporine appears to be more vascularized than DIGO caused by phenytoin. When patients are on combination medication, which includes two or more drugs known to cause gingival enlargement, it's difficult to say which should be credited to the DIGO diagnosis. In such circumstances, consulting the patient's physician and asking him to substitute/stop one drug at a time, starting with the one that has the least impact on the patient's regular schedule, is one way to arrive at a diagnosis.[5-7] Frequently, the patient has a long history of using relevant medications (antihypertensives, anticonvulsants, and immunosuppressants), although the enlargement has only been noticed in the last few months. In these circumstances, it's impossible to link the duration of the enlargement's recurrence to a medication history. A specific question about a recent change in medicine type/dose will aid in the association of the two. [8-11]

Genetic disorders associated with gingival enlargement

They can be classified into four groups based on their genesis, clinical characteristics, and histology. Idiopathic gingival hypertrophy, lysosomal storage disorders, vascular disorders, and those linked with typical dental abnormalities are among the conditions. Congenital familial fibromatosis, gingivomatosis, idiopathic fibromatosis, elephantiasis, and hereditary gingival hyperplasia are all terms for idiopathic gingival hypertrophy. It manifests as peculiar fibrotic gingival enlargement, which can be localised or widespread.[1] It might appear as a

separate entity or as part of a condition. A positive family history of gingival hypertrophy can help to confirm the diagnosis. It usually starts with eruption of the primary or permanent dentition.

The presence of hard bulky expansion of gingiva limited to the maxillary and mandibular second and third molar locations is a common observation. On palpation, the enlarged mass may be pink or reddish and firm/nodular. Although alveolar bone is rarely impacted, the existence of pseudo-pockets and difficulty maintaining oral hygiene might cause periodontal issues.[1,12] Extensive overgrowths might cause a patient's cosmetic and functional difficulties.

Conditioned gingival enlargement

Hormonal: Hormonal changes that pre-empt the response to local irritants influence generalised gingival hyperplasia during pregnancy and puberty. The interproximal gingiva has a larger diameter than the facial and/or lingual surfaces. The gingiva is usually soft and friable, brilliant crimson or magenta in colour, and has a smooth, shiny surface.[12] Bleeding can occur spontaneously or as a result of modest stimulus. Although the growth may subside on its own after birth, total eradication may necessitate the removal of any local irritants as well as subsequent surgical intervention to remove any fibrotic leftovers.

Vitamin C deficiency: The gingiva of individuals with vitamin C deficient enlargement is bluish red, soft and friable, and has a smooth, shining surface. Bleeding might happen on its own or as a result of a minor irritant. Surface necrosis with the creation of a pseudo membrane is also common.[13]

Plasma cell gingivitis: The cause of this condition is unknown, but it is thought to be a hypersensitivity reaction involving affluent plasma cells as shown histologically. Typical allergies linked to this lesion include toothpaste, khat, culinary products, particularly cinnamon, chewing gum, and unknown sources.[13] It could bleed if provoked. When patients eat hot and spicy foods, they frequently experience a burning sensation. The look is reddish in colour, with virtually completely adhered gingiva and a slightly granular surface.

Wegener's Granulomatosis: The cause of this condition is unknown, but it is thought to be a hypersensitivity reaction involving affluent plasma cells as shown histologically. Typical allergies linked to this lesion include toothpaste, khat, culinary products, particularly cinnamon, chewing gum, and unknown sources.[13] It could bleed if provoked. When patients eat hot and spicy foods, they frequently experience a burning sensation. The look is reddish in colour, with virtually completely adhered gingiva and a slightly granular surface.

Sarcoidosis: Sarcoidosis is a disease that affects multiple organs. Pulmonary infiltration and hilar lymphadenopathy, as well as cutaneous and ocular lesions, are the most common symptoms, while oral involvement is rare. Sarcoidosis does not have a specific test. Exclusion of various non-caseating granulomas producing situations and other laboratory tests are used to diagnose sarcoidosis.[13]

Unusual presentations: Amelogenesis imperfecta, Hashimoto's thyroiditis, I-cell disease, and Multiple myeloma have all been linked to generalised gingival hypertrophy. [15,16,17]

False enlargement: Increased size of underlying osseous (tori, exostosis, Paget's disease, cherubism, osteoma, etc.) or dental tissues causes these pseudo-enlargements (during tooth eruption). Except for the huge rise in size of the region, the overlying gingiva has no aberrant clinical characteristics.

Differential diagnosis of gingival enlargement necessitates a detailed dental and medical history, a thorough examination of the type, origin, and extent of the enlargement, and the identification of causative or predisposing variables.[19,20]

V. Conclusion

Gingivalenlargements can be diagnosed by a careful history (e.g., drug-induced or hormonal-induced gingival enlargement), location (e.g., mouth-breathing enlargement around anterior teeth), or clinical presentation (e.g., mouth-breathing enlargement around anterior teeth) (e.g., strawberry gingivitis). Gingival enlargements could be caused by local irritants (plaque and calculus) as a main or secondary cause. As a result, plaque control is an important element of all patients' care. To appropriately diagnose the unusual cases of gingival enlargement, an excisional/incisional biopsy and/or hematologic/histologic investigation may be required on occasion. The clinician should have an open mind and consider all possibilities before coming to the final diagnosis of the condition at hand.

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