Evaluation of Gingival biotype in different age groups and gender in students of Liaquat University of medical and health sciences

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ABSTRACT

Clinical and aesthetic consequences after periodontal or implant procedures depend on the anatomical and morphological characteristics of the gingiva such as width of keratinized gingiva, thickness of gingiva and alveolar bone. Therefore, the awareness of gingival biotype plays an significant role in modifying the dental treatment procedures to achieve the desired outcome and predictability.

Different types of anatomical, physiological and biochemical changes are observed between both the genders. There are several variations even in oral and dental tissues of diverse genders, which have been applied in forensic medicine and dentistry.

Keywords: Gender, gingival recession, gingival biotype, implant, prevalence

SHORT COMMUNICATION

Gingiva is a portion of oral mucosa that covers the alveolar process of jaw which surrounds the tooth in a collar fashion. It refers to the thickness of the gingiva in the labiolingual direction. Studies suggest that there exists a relation between the gingival biotype and susceptibility for gingival recession when undergone surgical and restorative procedures. The gingival biotype helps the in maintenance of oral health as well as in restorative and implant dentistry. Its features and characteristics vary anatomically and morphologically among males and females.

Different methods that can be used to measure gingival biotypes include the clinical assessment of gingival biotypes using a periodontal probe, indirect assessment with a visual estimation, direct measurement after tooth extraction, ultrasonic methods, transgingival probing, and cone beam computed tomography without reference object.

Delicate and hard tissue measurements of oral tissues are significant boundaries that influence the result of periodontal and therapeutic medicines, and furthermore help in scientific dentistry. There are numerous elements that may impact the structure and position of gingiva around the normal teeth or fixed prosthesis. Along these lines, it is valuable to have dependable rules or proxy target boundaries for the distinguishing proof of basic cases with dainty gingival as well as alveolar bone thickness, which may bargain the accomplishment of the treatment. Various boundaries have been utilized to survey the gingival thickness or the alleged gingival biotype.

Numerous strategies were proposed to gauge tissue thickness. These incorporate direct estimations, test straightforwardness, ultrasonic gadgets, and, most as of late, cone-pillar figured tomography (CBCT). In the immediate technique, the tissue thickness was estimated utilizing a periodontal test. At the point when the thickness was ±1.5 mm, it was sorted as a thick phenotype. At the point when the thickness was < 1.5 mm, it was viewed as a slender tissue phenotype. The width of connected gingiva fluctuates from tooth to tooth and furthermore among people with blended assessments in regards to a "satisfactory" or "adequate" measurement of the gingiva. Despite the fact that the requirement for an alleged sufficient measure of keratinized tissue for upkeep of periodontal wellbeing is flawed, the mucogingival intersection fills in as a significant clinical milestone in periodontal assessment. There are different techniques for finding the mucogingival intersection to be specific the utilitarian strategy and the visual technique with and without histochemical recoloring, which help in the estimation of the width of connected gingiva

Tissue phenotype are identified with the reaction of the periodontal tissues to any physical, compound, or bacterial affront, result of therapeutic, periodontal treatment, root inclusion methodology, and by and large feel of a dentition. Cautious thought and evaluation of the sort of phenotype has increased a central significance in the treatment making arrangements for any patient. Consequently, it is critical to pick up information about the pervasiveness of gingival phenotype in everybody and its relationship with other known clinical boundaries.

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The long term success of esthetic restorations in implant dentistry depends on several factors like gingival biotype, architecture of the gingival tissue and shape of the anterior teeth. The gingival morphology plays an important role in determining the final esthetic outcome.

The biotype of the gingiva is usually thick or thin. Thicker tissue is more resistant to the shrinkage or recession and more often leads to the formation of a periodontal pocket after bone loss. Thin gingival tissues around the teeth are more prone to shrinkage after tooth extraction and are more difficult to elevate or augment after tooth loss.

A gingival thickness of $\geq$ mm is defined as thick biotype and a gingival thickness of <1.5 mm as thin biotype. A clinician's knowledge in identifying gingival biotypes is paramount in achieving optimal treatment outcomes. Various invasive and non-invasive methods were proposed to measure tissue thickness. These include direct measurement, probe transparency method, ultrasonic devices, and cone-beam computed tomography scan.9 Placing a periodontal probe in the gingival sulcus and observing the transparency is a simple method to determine tissue thickness.

The aim of this study is to evaluate the variations in the thickness of gingiva with respect to age and gender.