

| Editorial

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Miller's Classification of Marginal Tissue Recession: 40 Years of a Game Changer

Classification systems of diseases and conditions are fundamental tools that standardize diagnosis, guide prognosis and treatment recommendations, support data collection and stratification in research, provide structure for educational purposes, and facilitate effective communication among health care professionals and with patients. Since the emergence of periodontics as a distinct dental specialty in the early 20th century,^{1,2} numerous classification systems for diseases and deformities affecting the periodontium have been proposed and applied. Notably, the evaluation of gingival recession defects (GRDs) in the context of mucogingival deformities has garnered sustained interest from both clinicians and researchers, which has translated into the development of numerous classification systems.³⁻¹⁰

From the original classification proposed by Sullivan and Atkins in 1968³ to the most recent system published by Chambrone and Avila-Ortiz in 2021,⁷ classification frameworks have been utilized to identify key anatomical features associated with GRDs, aiding clinical decision-making for the selection of surgical root coverage interventions. Arguably, the most influential and groundbreaking classification system for marginal tissue recession was introduced by Dr P. D. Miller in a 1985 publication in *The International Journal of Periodontics*

& *Restorative Dentistry*.⁴ In this article, Miller described four classes (or types) of GRDs and their anticipated treatment predictability, based on three critical variables: (1) the apical extent of the defect relative to the mucogingival junction (coronal to, at, or beyond it); (2) the level of integrity or degree of loss of interproximal tissues (bone or soft tissue); and (3) the presence of tooth malposition.⁴

Reflecting on the past 40 years, Miller's classification has undoubtedly been the most widely employed system in clinical practice, education, and research. It was revolutionary for practice, enabling clinicians to plan surgical interventions based on predictable treatment outcomes. Its straightforward and reproducible interpretation catalyzed its widespread adoption in clinical research and contributed to its appearance in hundreds of publications. As of April 25, 2025, the article has accumulated 886 citations in Scopus. Remarkably, the establishment of this classification as a user-friendly and reliable diagnostic tool led to the implementation of standardized criteria that continue to guide the development of evidence-based strategies in periodontal plastic surgery, particularly in evaluating the efficacy and feasibility of different surgical techniques based on specific defect characteristics.

It is noteworthy that two of the most iconic papers on the management of GRDs were published in the same year: Miller's classification system⁴ and Langer and Langer's description of the combination of a coronally advanced flap with a subepithelial connective tissue graft,¹¹ which remains the gold-standard approach for the surgical treatment of GRDs.^{12,13} The simultaneous publication of these landmark articles symbolically marked the beginning of a prolific era in periodontal plastic surgery, during which major advancements were introduced that "changed the game" for patients requiring treatment for GRDs.¹⁴

Although other frameworks have gained traction in recent years, it is important to emphasize that, four decades after its publication, P. D. Miller's classification system remains relevant in both clinical practice and research. Why? Because it is simple, easy to apply, reproducible, and directly linked to treatment prognosis and clinical decision-making based on site-specific variables. Some may argue that "Miller's classification system presents important inconsistencies" or that "more comprehensive and precise classifications are now available."⁵⁻⁷ While these are valid points, it must be acknowledged that all GRD classification systems possess inherent limitations.^{15,16} Moreover, we should not lose sight of the fact that today's most widely accepted classifications systems are clearly built upon Miller's foundational work. Rather than engaging in endless debates or exhaustive analyses over which system is superior, and to make a long story short, we would like to paraphrase Drs Pini Prato and Di Gianfilippo, who aptly stated that Miller's classification "reflected the state-of-the-art clinical practices and knowledge of its time."¹⁰

Kudos to you and your legacy, Dr Miller!

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