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Editorial

Three-Dimensional Anterior Anatomical Matrix Systems in Injectable Composite Applications: The Example of Superior Matrix

The development of resin-based composite materials in restorative dentistry has marked significant advancements by optimizing aesthetic, mechanical, and biological properties. In this context, the evolution of injectable composites has provided a broad range of applications in clinical practice, thanks to their flowability and adaptability. However, the application of injectable composites in anterior teeth has been largely limited to the use of transparent silicone indexes in clinical practice to date. This limitation confines their use in cases involving multiple anterior teeth, necessitating additional laboratory work, which in turn extends treatment time and increases costs. At the same time, it significantly enhances the technical precision required for these procedures. However, the widespread adoption of three-dimensional anterior anatomical matrix systems, such as Superior Matrix (Gelenbevi Academy R&D, Zafer Technopark, Usak, Türkiye) allows for the effective use of injectable composites in more diverse scenarios, such as large Class III cavities, diastemas, and fractured teeth.

Injectable composites exhibit superior performance in flexibility and durability compared to traditional flowable and bulk-fill composites. This superiority is attributed to silane coating technology, which enhances the bonding strength between the composite material and the matrix. Products like G-ænial Universal Injectable have been reported to offer particularly high mechanical durability and wear resistance in clinical applications. Additionally, these materials demonstrate wear performance comparable to CAD/CAM restorations in stress-bearing regions (1, 2). Superior Matrix, as part of the product range of three-dimensional anterior anatomical matrix systems, facilitates the placement and anatomical shaping of injectable composite materials, significantly simplifying anterior restorations for clinicians. This innovation enables the widespread use of wear-resistant new Injectable materials in anterior restorations.

Superior Matrix, as a pioneering product among three-dimensional anterior anatomical matrix systems, enables the effective application of injectable composites in complex anterior restorations. With its three-dimensional anatomical design and silicone index-like structure, this system ensures precise anatomical shaping of anterior restorations. By providing clinicians with a highly efficient method to shape composites, it maximizes the benefits of injectable composites' superior adaptability (Figure 1). This approach not only reduces clinical errors but also significantly enhances aesthetic outcomes, making it an indispensable tool for dental practitioners.

In conclusion, injectable composites represent an innovative advancement in restorative dentistry. Their integration with three-dimensional anterior anatomical matrix systems expands their clinical application areas, enabling superior performance in terms of aesthetics and functionality.

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Editor-in-Chief

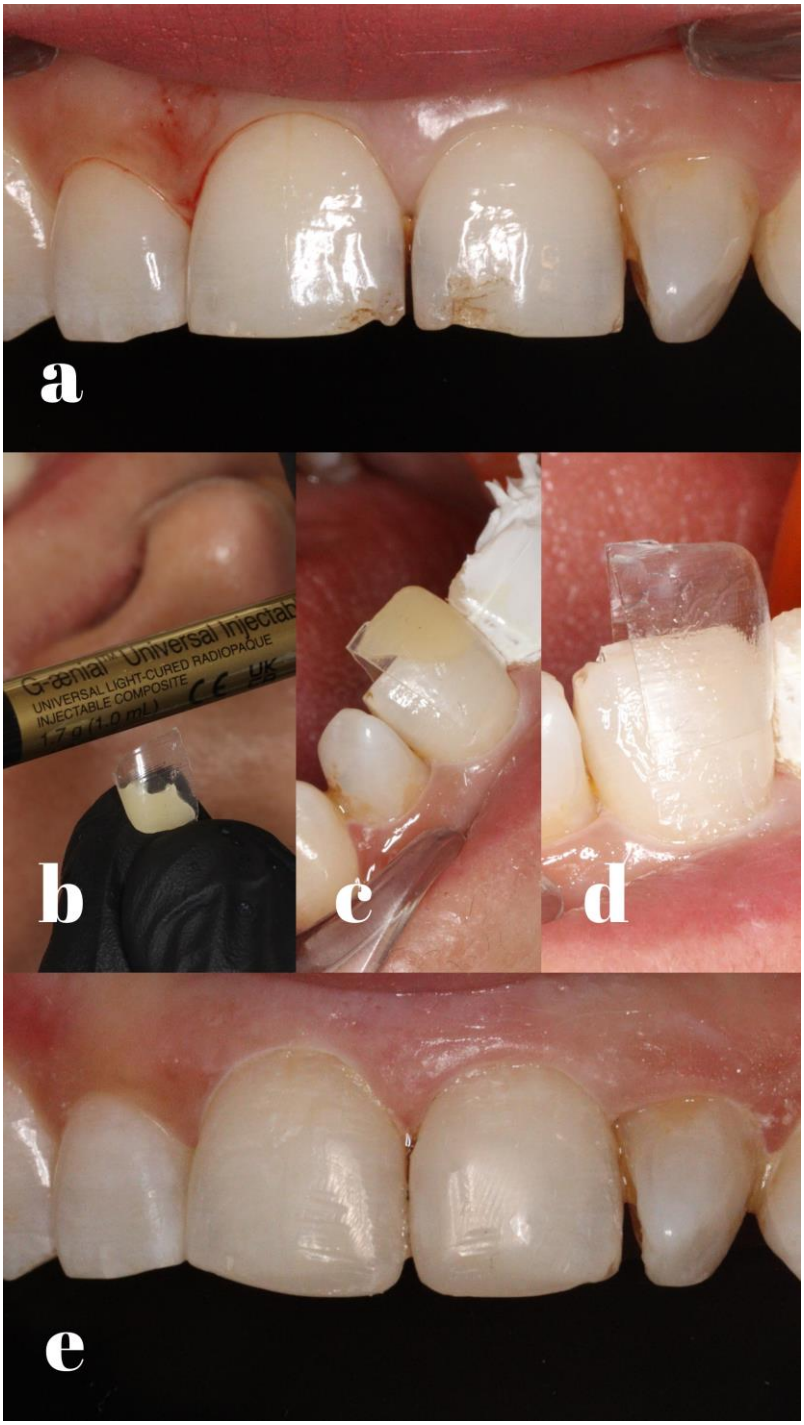

Figure 1. The initial state of the case is illustrated. After cavity preparation, a material loss including the incisal corner is observed (a). The injectable composite (GC Injectable, A2) is placed into the three-dimensional anterior anatomical matrix (b). Following cavity preparation and adhesive procedures, the matrix is positioned (c). The matrix is removed after polymerization of the injectable composite (d). The final state after finishing and polishing procedures is shown (e).

References

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