

Direct restoration reinvented: Vertise Flow meets bulk fill



Dr. Ayman Mohamed

Adhesive dentistry has revolutionized restorative procedures, promoting conservative and highly aesthetic restorations. Among the latest innovations, Vertise Flow by Kerr stands out as a self-adhering flowable composite, simplifying the restoration process by eliminating the need for a separate bonding agent. This innovation not only streamlines clinical workflow but also ensures reliable adhesion, leading to durable and esthetic restorations. The unique formulation of Vertise Flow integrates the benefits of both a flowable composite and a bonding agent, reducing chair time and improving efficiency. Clinicians can achieve excellent marginal adaptation and long-term performance, making it an ideal choice for a variety of clinical scenarios.

The following clinical case showcases the use of Vertise Flow in combination with SimpliShade Bulk Fill composite.

Case Presentation

A 26-year-old patient presented with carious lesions affecting the occlusal and proximal surfaces of the upper right first and second premolars. The treatment goal was to remove the caries conservatively and restore the teeth using a simplified adhesive protocol while maintaining high esthetic and functional standards.

Clinical Steps

- Rubber Dam Isolation.
- Conservative Cavity Preparation.
- Caries Detector Application.
- Matrix and Wedge Placement.
- Application of Vertise Flow.
- Bulk Fill Composite Placement
- Light Curing.
- Finishing and Polishing

About Dr. Ayman Mohamed



Dr. Ayman Mohamed is a restorative dentist with extensive experience in adhesive and aesthetic restorations. He specializes in anterior and posterior composite restorations, with a strong focus on precision, natural esthetics, and long-term function. Dr.

Ayman is an international speaker who actively shares his clinical expertise and passion for composite artistry through lectures, workshops, and hands-on training. He is committed to adopting innovative materials and minimally invasive protocols to deliver high-quality, natural-looking outcomes for his patients.



Fig. 1 - Pre-operative occlusal view showing discoloration and anatomical contour suggestive of proximal caries between the first molar and second premolar.



Fig. 2 - Split dam isolation was performed, with a soft clamp placed on the first molar due to the presence of a crown. Sectional matrix and wedge were used to ensure proper tooth separation and protection of adjacent structures prior to proximal cavity preparation.



Fig. 3 - Initial cavity access showing clearly visible proximal carious lesions on the distal surface of the first premolar and the mesial surface of the second premolar.



Fig. 4 - Caries detector dye applied to the cavity to ensure complete removal of infected dentin. Staining indicates remaining carious tissue on the mesial surface of the second premolar.



Fig. 5-6 - Occlusal view after cavity preparation. Partial caries removal was performed on the mesial surface of the second premolar.



Fig. 7 - Sectional matrix band, wedge, and separating ring placed to ensure proper adaptation and tight seal on the first premolar. Teflon tape was used on the second premolar to preserve the cavity space and avoid interference during restoration of the adjacent tooth.



Fig. 8 - Application of Vertise Flow (Kerr) as a self-adhering flowable liner on the cavity floor of the first premolar. The material was placed directly without prior etching or bonding, simplifying the adhesive protocol and enhancing clinical efficiency.



Fig. 9 - Simplishade Bulk Fill (Kerr) composite placed prior to finishing and polishing. OptiBond Universal (Kerr) was used in a self-etch technique to ensure reliable adhesion and simplify the bonding procedure.



Fig. 10 - Second premolar after placement of the separating ring and Adapt transparent sectional matrix band. The matrix provides excellent adaptation and visibility, ensuring proper contour and contact during restoration.



Fig. 11 - Application of Vertise Flow (Kerr) as a self-adhering flowable composite liner on the cavity floor of the second premolar. The material was placed directly without prior etching or bonding, supporting a simplified and efficient adhesive protocol.



Fig. 12 - Proximal wall built using Simplishade Bulk Fill (Kerr) composite on the second premolar. This step restores the contour and facilitates layering of the remaining occlusal portion with optimal anatomical accuracy.



Fig. 13 - Final restoration after finishing and polishing, showing well-blended occlusal anatomy and smooth surface integration. Photo taken before checking for high spots and occlusal adjustment.



Fig. 14 - Post-operative view showing occlusal marking with articulating paper to evaluate high spots. Final adjustments will ensure balanced occlusion and patient comfort following composite restorations.

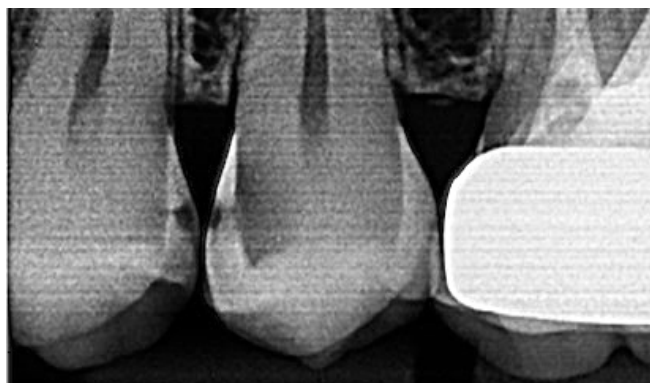


Fig. 20 - Pre-operative bitewing radiograph showing radiolucent proximal caries between the first and second premolars, confirming the clinical diagnosis and treatment plan.

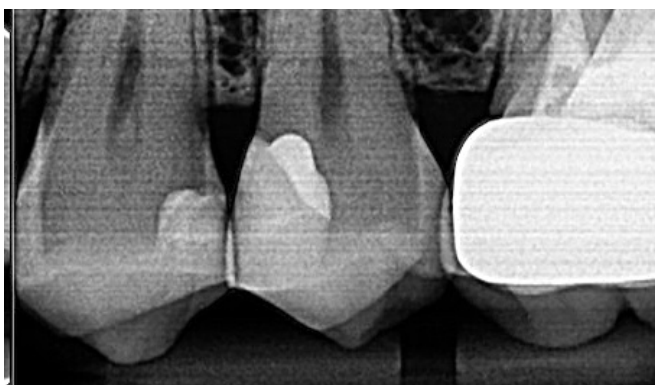


Fig. 20 - Post-operative bitewing radiograph showing well-adapted proximal composite restorations on the first and second premolars, with proper contact and marginal seal

Discussion

Self-adhering flowable composites represent a practical evolution in adhesive dentistry. Compared to traditional multi-step adhesive systems (etch-and-rinse or self-etch adhesives), self-adhering composites reduce operator error by minimizing the number of steps required. Vertise Flow, incorporating GPDM technology, achieves both micromechanical and chemical bonding, improving bond strength to both enamel and dentin. Combining self-adhering liners with bulk-fill composites optimizes clinical efficiency without compromising aesthetics or function.

Conclusion

The integration of Vertise Flow as a self-adhering liner, followed by the use of SimpliShade Bulk Fill, provided an efficient, predictable, and highly esthetic solution for the direct restoration of posterior teeth. This approach minimized procedural steps without compromising bond strength, functional outcomes, or esthetic results.

Clinical Tips & Key Takeaways

- Always use rubber dam isolation when working with adhesive materials.
- Apply Vertise Flow in a controlled, thin layer for maximum adaptation.
- Cure bulk fill composites deeply according to manufacturer recommendations.
- Prioritize correct matrix placement to achieve natural proximal contacts.
- Finishing and polishing enhance esthetics and improve long-term success.

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Disclosure: Dr. Ayman Mohamed is a consultant for Kerr. The opinions and technique expressed in this article are based on the experience of Dr. Ayman Mohamed. Kerr is a medical device manufacturer and does not dispense medical advice. Clinicians should use their own professional judgment in treating their patients. All trademarks and brand names are the property of their respective owners.