Grandio – 4-year clinical study

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Grandio, the nano-hybrid composite, is distinguished by its outstanding physical characteristics. Whether these properties lead to an intact treatment in the long-term under actual conditions was examined in two independent 4 year clinical studies.

University of Erlangen Study

36 patients were followed in this study. Class II cavities were treated exclusively with a combination of Solobond M and Grandio. All restorations were clinically acceptable after 4 years; No restorations were lost. A more exact evaluation is displayed in Figure 1.

Figure 1: Result of the 4 year study at the University of Erlangen

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

- Surface roughness
- Shade match
- Marginal integrity
- Integrity of the tooth filling
- Integrity of the tooth
- Proximal contact
- Change in sensitivity
- Hypersensitivity
- Radiopacity

Alpha 1  Alpha 2  Bravo
Study at the University of Tanta, Egypt\textsuperscript{[2]}

65 Class V cavities were treated with a combination of Futurabond NR and Grandio in this study. All of the restorations in this study were also clinically acceptable after 4 years. As in the study shown above, the retention rate was 100%. A more exact evaluation is shown in Figure 2. In this clinical long-term study, Grandio also exhibited excellent long-term results for the treatment of Class V cavities.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure2.png}
\caption{Result of the 4 year study at the University of Tanta\textsuperscript{[2]}}
\end{figure}

The effect of an additional etching was also examined in this study. The study came to the conclusion that an additional enamel etching did not provide a positive effect. On the contrary, it was determined that etching the enamel and dentine (total etch) causes significant deterioration.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure2.png}
\caption{Result of the 4 year study at the University of Tanta\textsuperscript{[2]}}
\end{figure}

Conclusion: Treatment with Grandio in both Class II and Class V cavities also yielded excellent results after 4 years. The excellent results determined \textit{in vitro} thus also prove true in practice.

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