Pull out Test Summary

Pull out test of the glass fiber post with three different cements performed at the University of Groningen (NL)

Materials and Methods

Patent™ two-piece implants were embedded in epoxy to be fixed in a universal testing machine. Glass fiber posts were cemented with three different cements, table 1, according to the manufacturer´s instructions. After curing, the samples were individually fixed in the universal testing machine, the glass fiber posts were pulled out and the maximum pull force was registered, **figure 1** and **2**. Five samples were tested for each cement.

Manufacturer	Brand
3M ESPE	RelyX
Ivoclar	Multilink
Kerr	Nexus 3

Table 1: Cements tested.

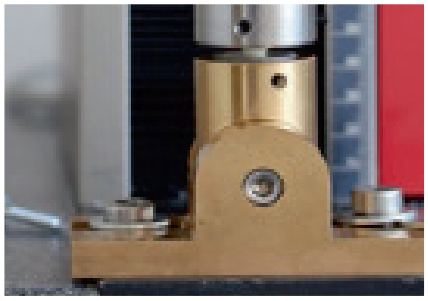

Figure 1: Test set-up in universal testing machine.

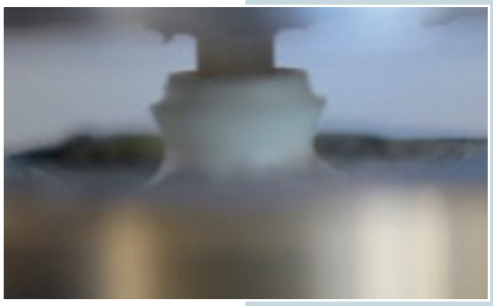

Figure 2: Close-up of the embedded implant with the cemented post.

Results

The results are presented in diagram 1.
RelyX demonstrated a pull-out force of 1391 ± 28 N, **Multilink** 796 ± 22 N and **Nexus 3** 507 ± 25 N.

Conclusion

All three tested cements demonstrated a pull-out resistance at a level that is adequate for clinical use. **RelyX** demonstrated the highest pull-out resistance.

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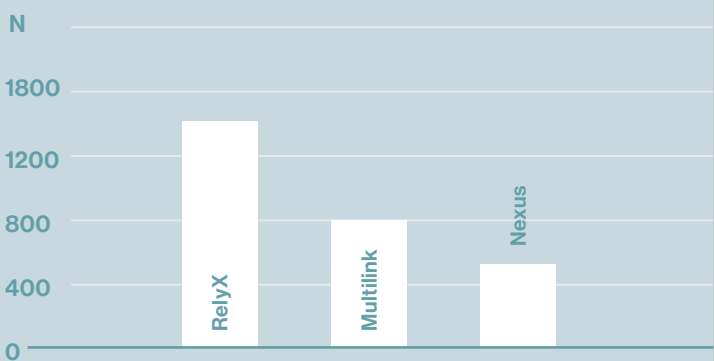

Diagram 1: Pull-out force for the different cements.

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MKT065 2020/V01EN