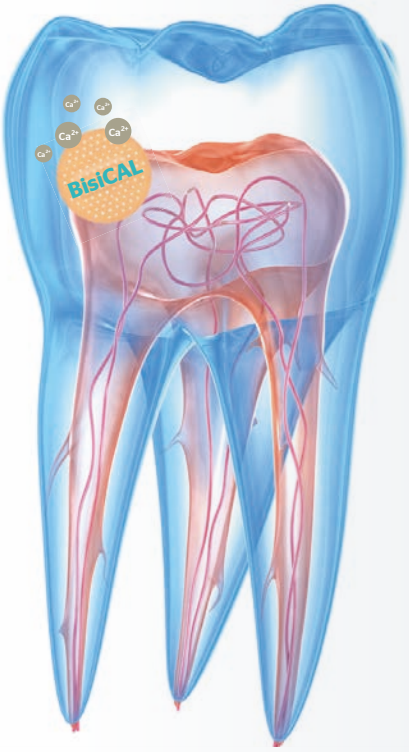


BisiCAL

The calcium plaster for the pulp

The following is a report on a clinical trial of a vitality-preserving treatment option using the product BisiCAL, a bioactive, light-curing, resin-modified calcium silicate for pulp capping with MTA fillers.

Text dentists Dipl.-Stom. Ursula and Andreas Bäßler
Picture dentists Dipl.-Stom. Ursula and Andreas Bäßler, bisico GmbH & Co. KG

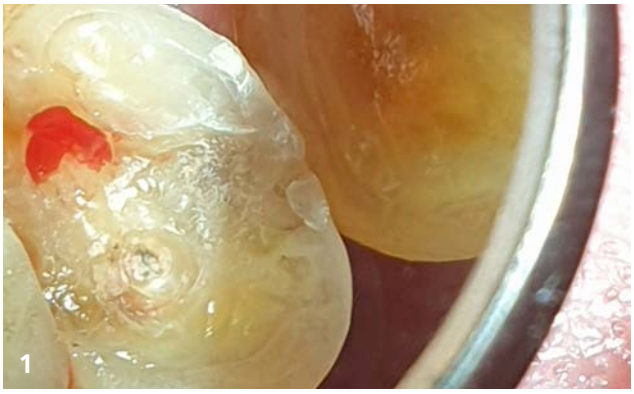
Initial situation Case1 – Direct Capping of 14

A 77-year-old patient presented to our practice on 19/5/2021 with pulpitic complaints relating to tooth 14. During the assessment, the vitality (cold stimulus) was tested for positivity before we anaesthetised the patient for treatment.

The X-ray showed a caries profunda close to the dental nerve, which is why we decided to perform a direct capping with the BisiCAL pulp capping material from bisico GmbH.

Treatment Case 1

Due to the excavation of the caries profunda, under local anaesthetic delivered to the terminal branches of the nerve, the pulp cavity was opened with simultaneous haemostasis. Cavity disinfection was performed with sterile cotton pellets and 3% sodium hypochlorite solution. After relative draining, we performed direct capping of the pulp with BisiCAL. This was followed by the conditioning of the cavity with E-Bond LC from bisico. Finally, a multi-surface composite filling was placed (Fig. Case 1, Figs. 1 to 4).

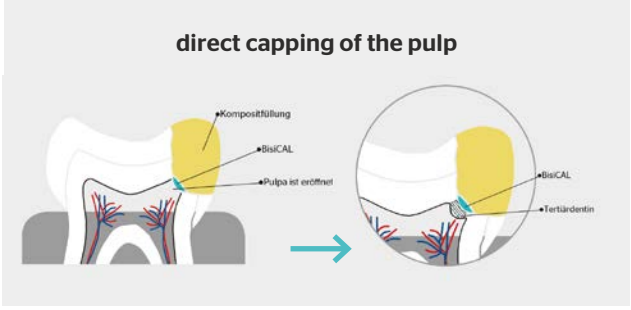


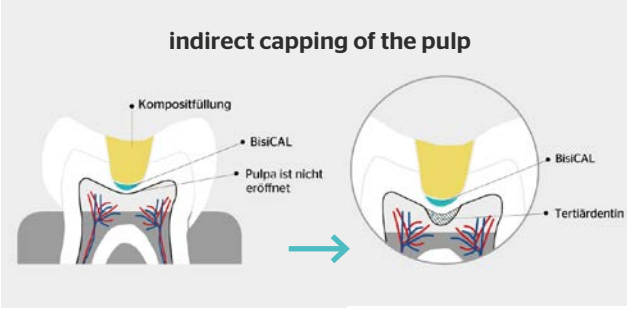
situation after excavation.

Step-by-step introduction of BisiCAL

complete direct capping

result





Initial situation Case 2 – Indirect Capping of 27

The 54-year-old female patient presented to our practice on 9/6/2021 with complaints relating to tooth 27. The vitality test using cold spray was positive and the X-ray also revealed a caries profunda. The clinical findings made indirect capping necessary. For this purpose, we also used the pulp capping material BisiCAL from bisico.

Treatment Case 2

After removal of the caries profunda on tooth 27, which was also performed under local anaesthesia delivered to the terminal branches of the nerve, and without bleeding due to the localisation, cavity disinfection was performed with sterile cotton pellets and 3%sodium hypochlorite solution. We then indirectly capped the cavity with the pulp capping material BisiCAL, treated the cavity with Bisico E-Bond LC prior to composite placement and completed the treatment in a fairly short session to everyone's satisfaction (Figs 5 and 6).

In both cases, the occlusion was checked after the composite fillings had been cured, excess areas were reworked and finally a high gloss polish was applied. Both patients left the practice without complaints and were visibly satisfied.

situation after indirect capping

final care

At the follow-up appointment of each case eight weeks later, the patients reported that they were symptom-free. A renewed vitality test by means of cold spray was positive.

Conclusion

Direct administration of BisiCAL by means of a syringe provides for hygienic and stress-free application, especially in the posterior molar region. Further positive properties of this pulp capping material are that it adapts well to the cavity wall and any excess is easy to remove.

Any stickiness on the instrument plays a minor role, as the material is supplied in a syringe and application with the filigree tip is easy to handle. The entire workflow can be easily integrated into the placement of the composite filling.

All in all, we found BisiCAL – The Calcium Patch for Pulp – to be very practical and we would highly recommend it.

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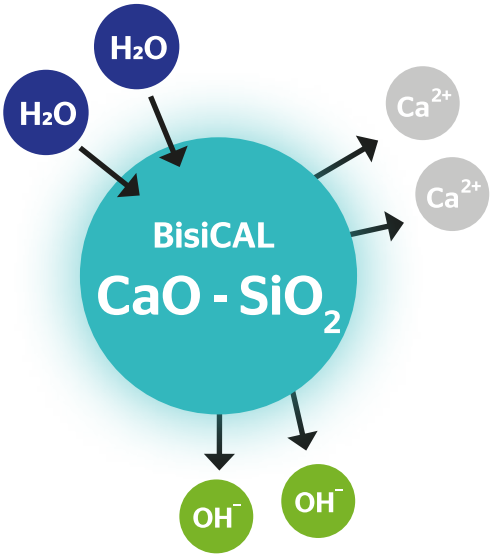
product information

bisico®



BisiCAL is a bioactive light-cure resin reinforced pulp capping material with MTA-f-illers. The release of calcium-ions supports the formation of tertiary dentine. The result is a safe pulp protection. The high alkaline pH level has bactericidal effects and thus supports healing and protects against hypersensitivity. BisiCAL is moisture tolerant, insoluble and shows a high radiopacity. Thanks to its thixotropic behavior and with the supplied needletip BisiCAL can be applied very precisely, even in deep cavity preparations.

Light cure of BisiCAL ensures controlled setting. After 40 seconds of light curing the next clinical step is possible. BisCAL is a one-component material, mixing times and errors are avoided. The light curing process ensures a fast and controlled fixation of the material. The high pH value creates an environment that is hostile to bacteria. Thanks to bioactive fillers, tertiary dentin (hydroxyapatite (Ca5(PO4)3(OH)) is formed by releasing Ca2+ and OH-ions. The pulp is protected and supported in healing.