

Deep cavity restoration procedure⁽¹⁾ with Biodentine™ XP Bio-Bulk Fill procedure*

Direct Pulp capping (vital tooth) First session

- 1 Assess the pulp status
- 2 Isolate the tooth with a rubber dam
- 3 Remove remaining caries
- 4 Adapt a matrix around the tooth if a wall is missing⁽²⁾
- 5 Achieve haemostasis by compression (1-6% NaOCl)
- 6 Activate the Biodentine™ XP cartridge, use Biodentine™ Mixer
- 7 Using Biodentine™ Gun, place the tip at the cavity base and slowly inject Biodentine™ XP while retracting the tip (Bio-Bulk Fill)⁽³⁾
- 8 Ensure marginal adaptation, minimal occlusal shaping/pressure on the setting Biodentine™ XP
- 9 Keep Biodentine™ XP out of occlusion

In case of indirect pulp capping, proceed to a minimally invasive selective caries removal by retaining caries-affected dentine over the pulp

If haemostasis cannot be achieved within 5 minutes, further pulp tissue should be removed (partial or full pulpotomy)

If the patient's follow up is not possible, finalize the procedure in 1 session

- 1 Leave 2 mm space, wait for initial setting at least 12 min
- 2 Apply self etch adhesive system (selective etch or self-etch mode) over Biodentine™ XP and tooth structure
- 3 Place a resin composite
- 4 Patient recall according to current recommendations

Direct Pulp capping (vital tooth) Second session

minimum 2 weeks to 6 months
after 1st session

- 1 Assess the pulp vitality status
- 2 Cut Biodentine™ XP back sufficiently (average 2 mm)
- 3 Apply the adhesive system: total etch (etch&rinse) or self-etch over Biodentine™ XP and tooth structure
- 4 Place a resin composite
- 5 Patient recall according to current recommendations

(1) Procedure extracted from international dental practitioners experts board (Position statement. September 2023).

(2) Extensive Class II will require proximal wall build up (Mount G.J, Hume WR. A new cavity classification. Australian Dental Journal. 1998;43(3):153-9).

(3) Possible technique in the context of a coronal restoration.

*Fill the entire cavity with only Biodentine XP from the pulp to the tooth surface. Final enamel restoration to be performed in the same session on in the second session which can be performed between 2 weeks and 6 months later.

Bio-Bulk Fill procedure

Direct pulp capping in two sessions

1st session



Assess the pulp status.



Isolate the tooth with a rubber dam.



Remove remaining caries.

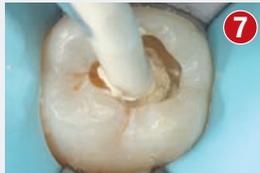
Adapt a matrix around the tooth if a wall is missing



Achieve haemostasis by compression (1-6% NaOCl).



Activate the Biodentine™ XP cartridge, use Biodentine™ Mixer.



Using Biodentine Gun, place the tip at the cavity base and slowly inject Biodentine™ XP while retracting the tip (Bio-Bulk Fill).



Ensure marginal adaptation, minimal occlusal shaping/pressure on the setting Biodentine™. Keep Biodentine™ out of occlusion.



Post-op radiography: Biodentine™ XP in the entire cavity up to the tooth surface.

2nd session: 6 weeks later



Assess the pulp vitality status.



Cut Biodentine back sufficiently (average 2 mm).



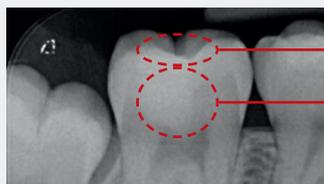
Apply the adhesive system: total etch (etch&rinse) or self-etch over Biodentine™ and tooth structure.



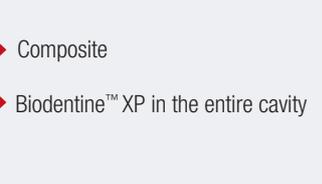
Place a resin composite.



Final result.



Post-op radiograph.



Composite

Biodentine™ XP in the entire cavity

Patient recall according to current recommendations

Clinical case by Prof. J. Sabbagh DDS, MSc, PhD, FICD, HDR

Biodentine™ XP



The unique

Pulp therapeutic

&

Restorative material

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