

Ribbon-Direct Composite on an Endo Premolar



The Problem. What to do next?



The Problem



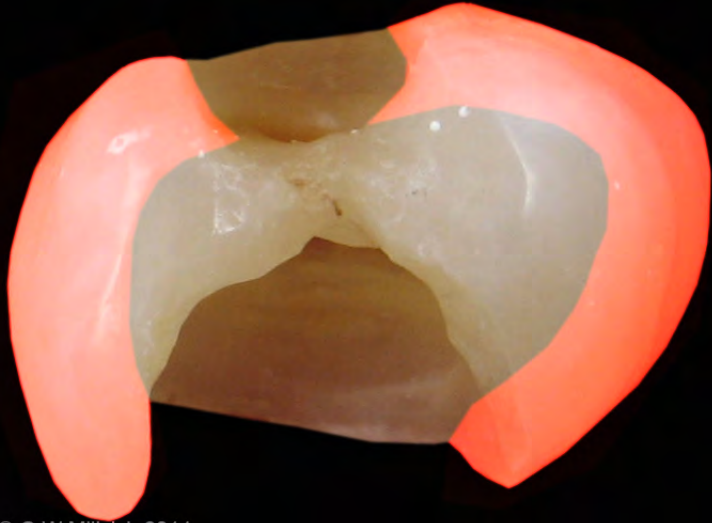
- Best aesthetics will be to leave the facial enamel intact.
- The risk – the tooth is biomechanically weak following removal of caries and completion of endo.
- Fracture risk.
- Note: the mesial decay removal was not joined to the distal. Retain all sound tooth structure!

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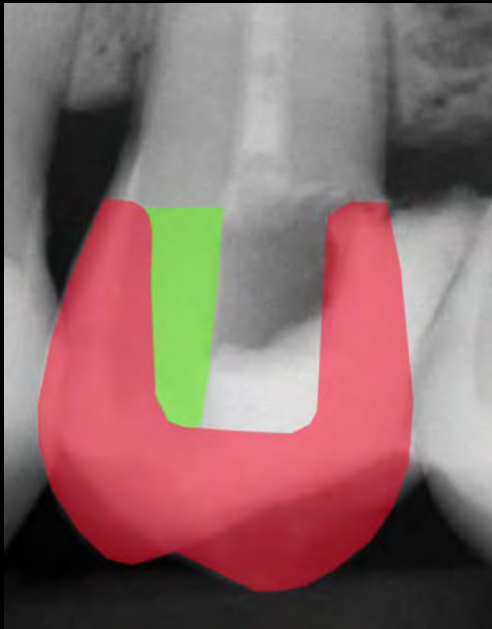


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The Problem



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- Almost all the remaining tooth structure is removed with a crown prep.
- Now, most of the load will be on a post!
- This is a high risk treatment option on premolars.



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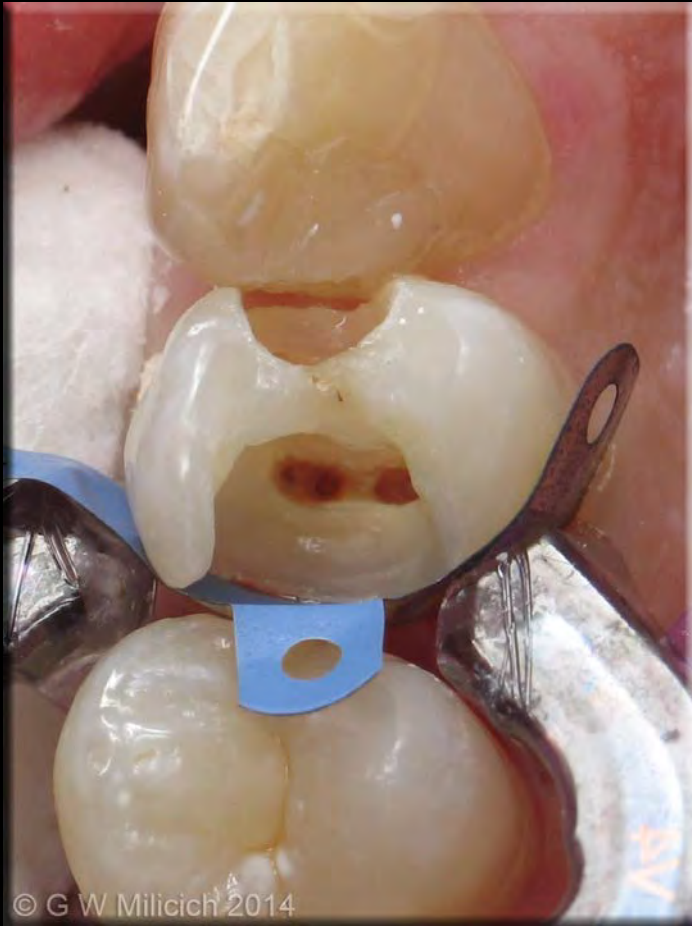
The Solution



- Create a Ribbond torsion box inside the tooth to prevent crack propagation and create energy dissipation



The Solution



- GP removed 2mm into canals
- Margins bevelled
- V4 Ring and sectional matrix
- Isolation with an Isolite

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The Solution



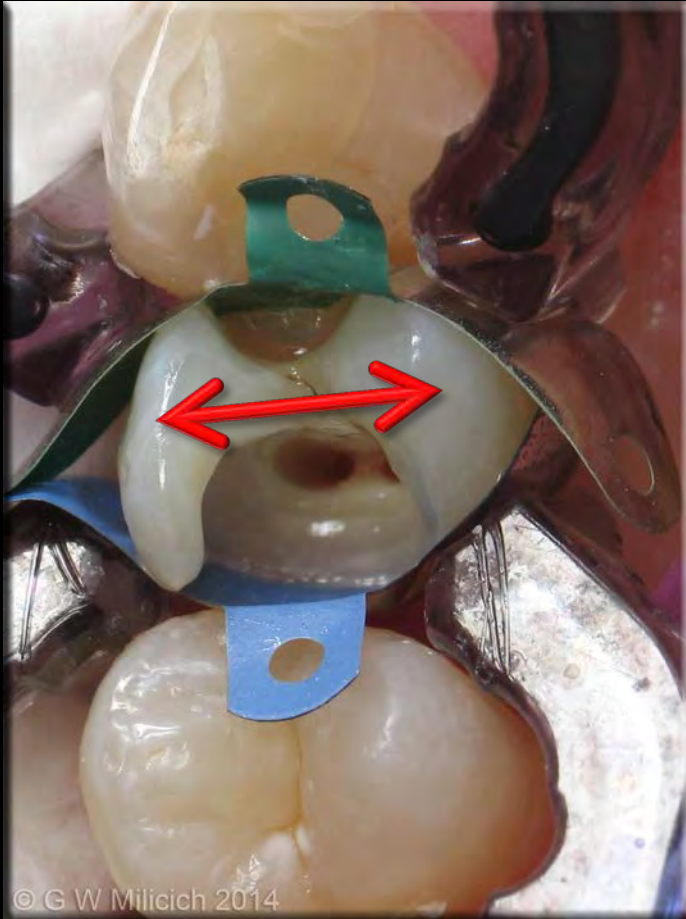
- Completed Triodent sectional V4 Rings and non stick matrices
- Keep the height of the matrix at the marginal ridge to act as a build up guide

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The Solution



- Enamel margins selectively etched
- Bonded: Kuraray SE Protect
- Critical **inter-cuspal** cross bracing retained



The Solution



- Thin layer of radio-opaque flow placed **only on the gingival margins.**
- Because Ribbond works best when applied directly to the dentin.



The Solution



- First interproximal increment of A1 (enamel shade) <1mm thick. (Gaenial Posterior nano-hybrid)
- Both cavities at the same time
- Accurately built to height of marginal ridge



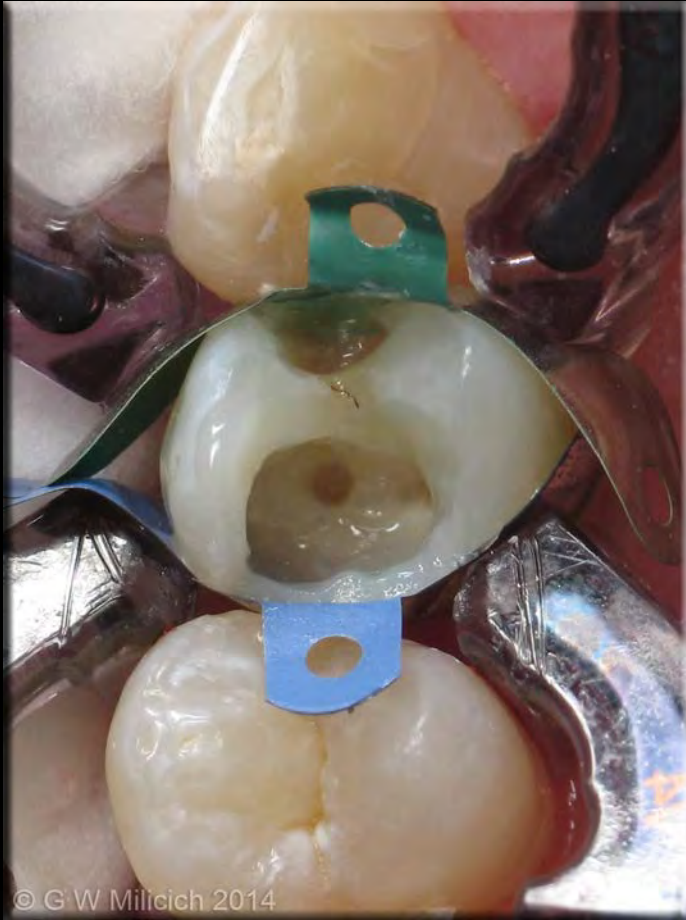
The Solution



- 2nd interproximal increment of A1 (enamel shade)
- Both cavities at the same time



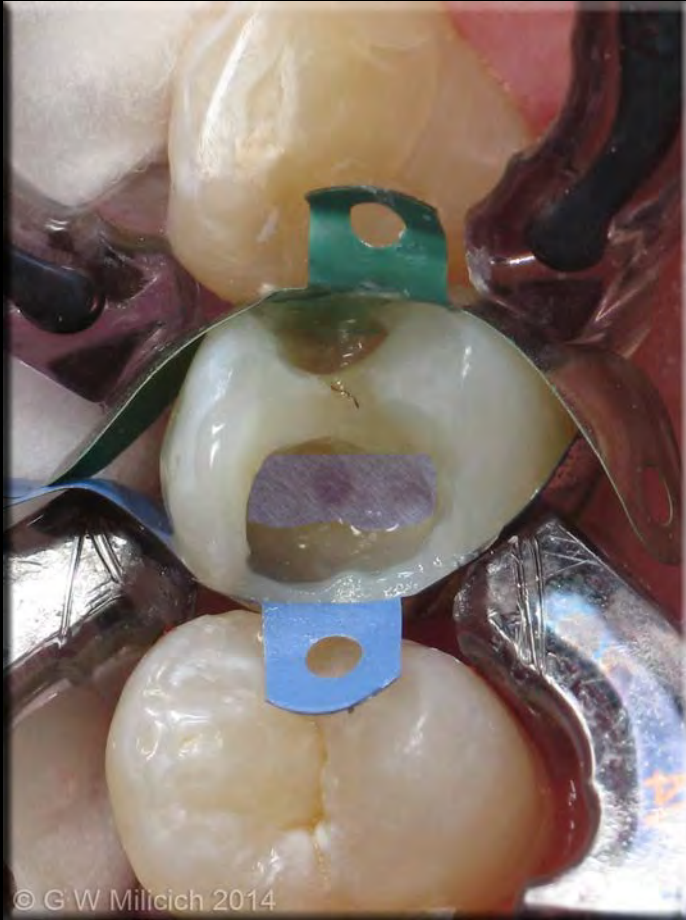
The Solution



- 2mm wide Ribbond THM Ultra place bucco-lingually and pushed down into each canal
- Place a THIN layer of warm nano-composite on floor and compress Ribbond right through the composite
- Remove excess



The Solution



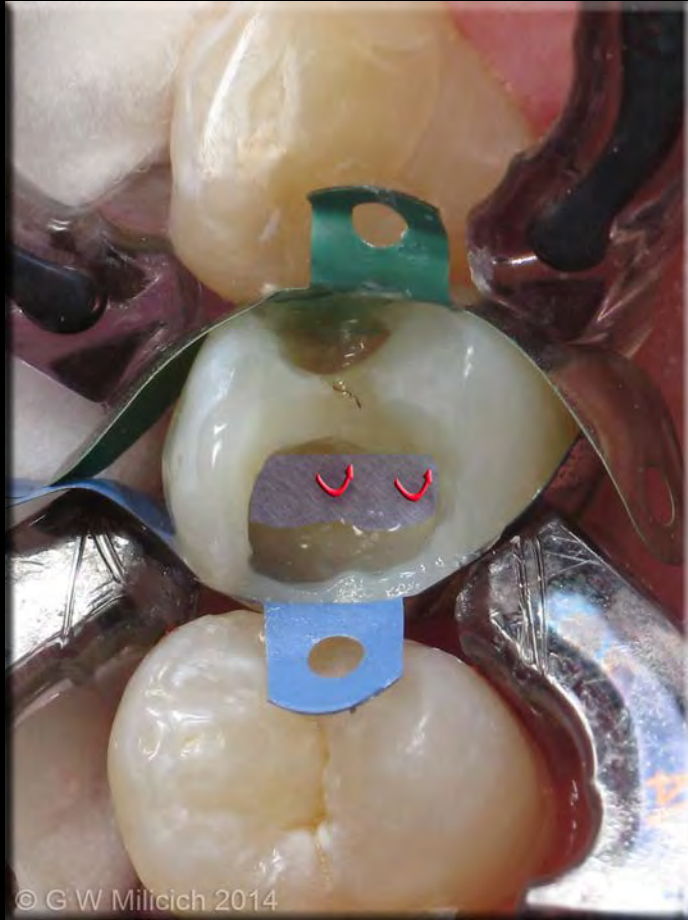
- The Ribbond in the canal entrances creates a torsional lock, stabilizing the core bucco-lingually and mesio-distally

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The Solution



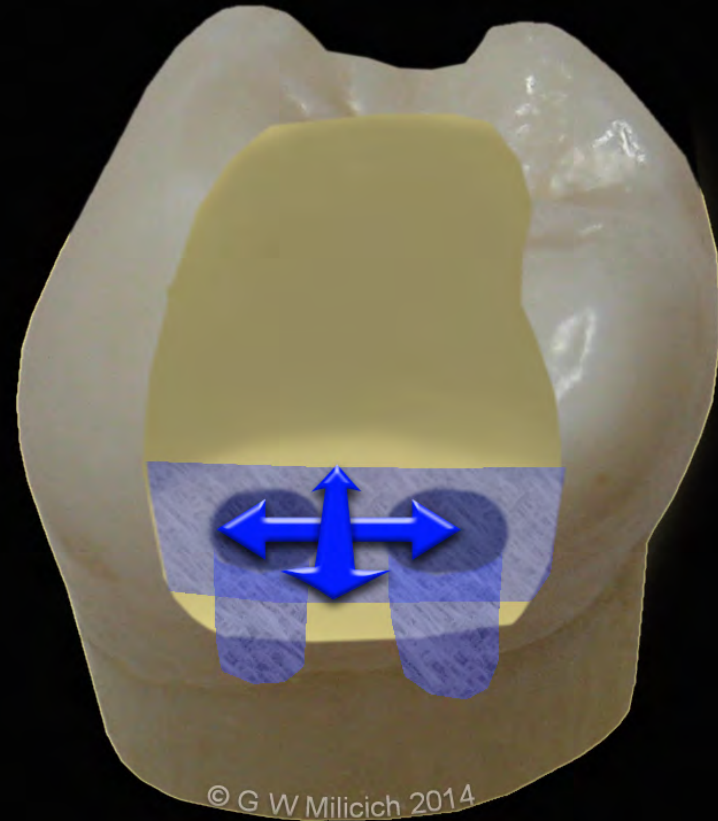
- The Ribbond in the canal entrances creates a torsional lock, stabilizing the core bucco-lingually and mesio-distally

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The Solution



Resistance to bucco-lingual, mesio-distal and rotational movement



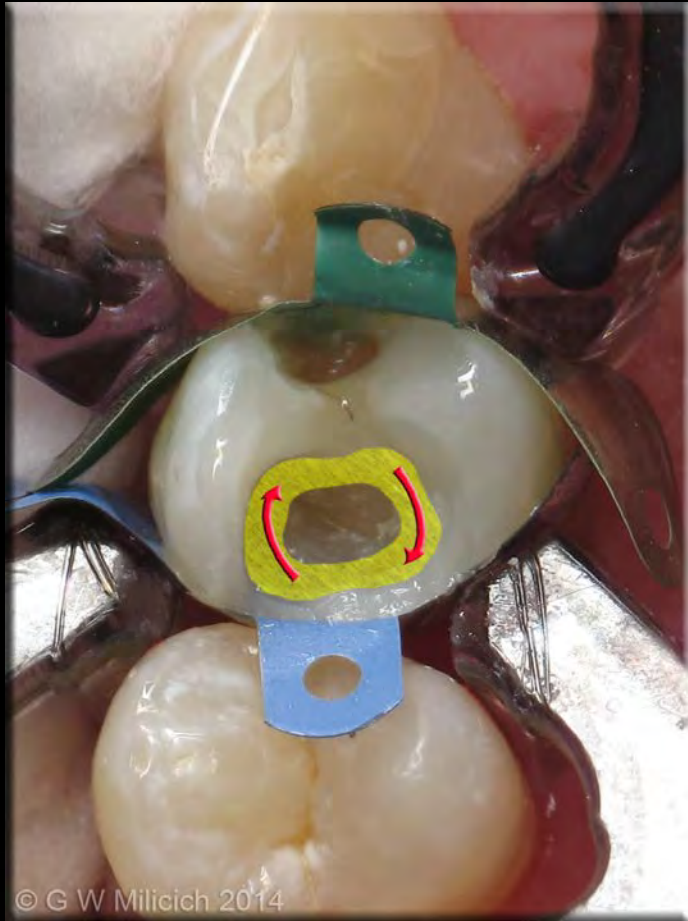
The Solution



- Wrap a 3mm wide length of TBM Ultra completely around the walls of the cavity



The Solution



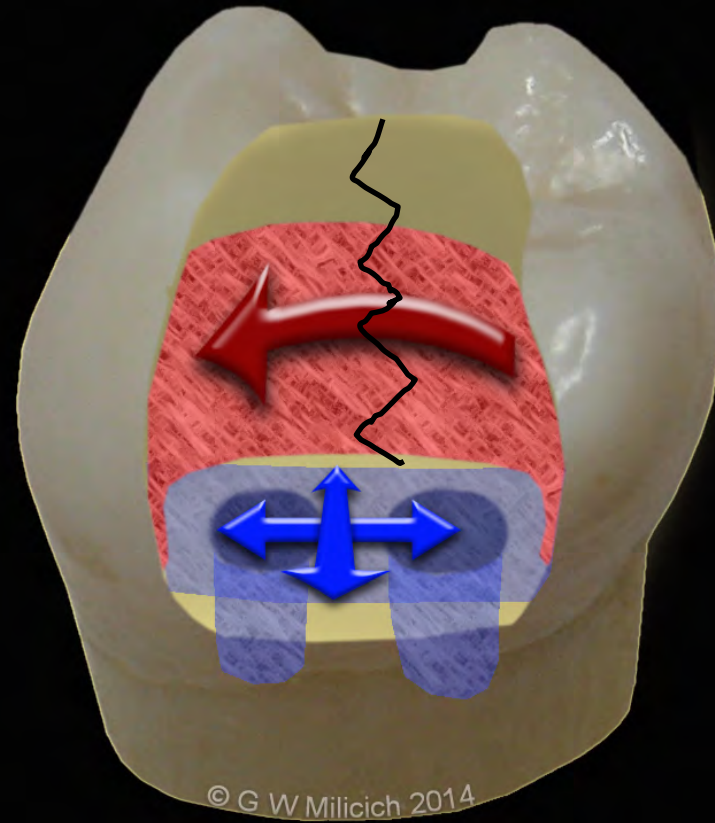
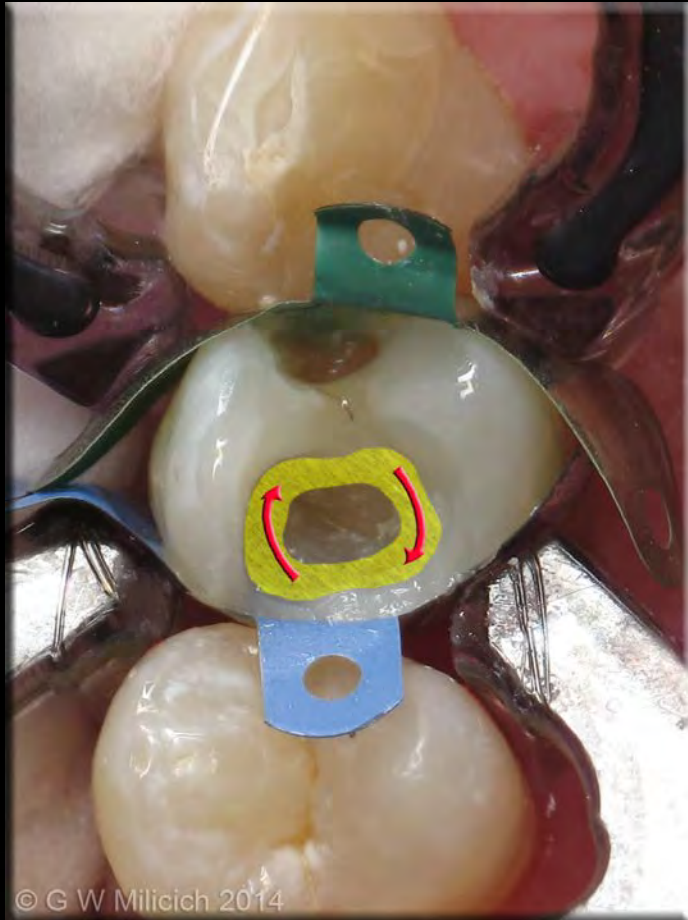
- Wrap a 3mm wide length of THM Ultra completely around the walls of the cavity
- This creates the walls of a fibre torsion box
- The Ribbond on the vertical walls prevents vertical crack propagation in the tooth



The Solution

Circumferential Ribbond wrap.

On vertical dentin wall from buccal to lingual,
as well as the enamel walls and composite.



Resists vertical splitting forces and
torqueing forces
Distributes and dissipates stresses



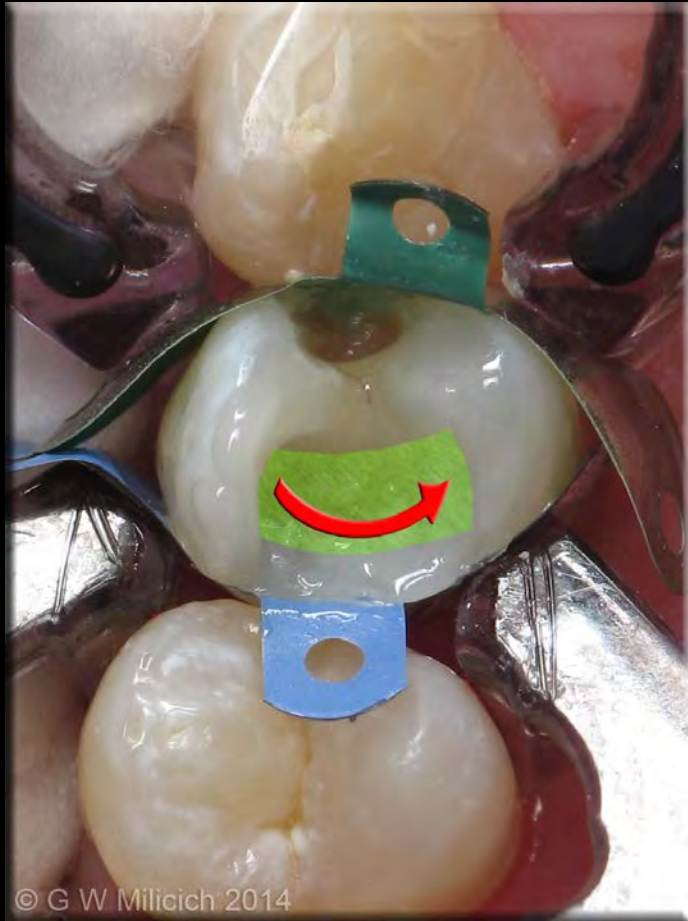
The Solution



- Place 3mm wide length of THM Ultra buco-lingually
- Down the buccal wall, across the floor and up the palatal wall to stop at the dentino-enamel junction



The Solution



- Place 3mm wide length of THM Ultra buco-lingually
- Down the buccal wall, across the floor and up the palatal wall to stop at the dentino-enamel junction



Completion of the Ribbond torsion box core



- EverX Posterior (GC) glass fibre reinforced composite placed to stop 2mm from the occlusal surface

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Completion of the Ribbond torsion box core



- EverX Posterior (GC) glass fibre reinforced composite placed to stop 2mm from the occlusal surface

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Aesthetic Composite Reconstruction



- 1st layer of A1 Gaenial Posterior with the fissure pattern and cusp lobes created with an Ash 6 probe
- (Jason Smithson technique)



Aesthetic Composite Reconstruction



- 2nd layer of Bleach Gaenial Posterior with the fissure pattern and cusp lobes created with an Ash 6 probe
- Brown stain placed in depths of fissures



Aesthetic Composite Reconstruction



- 3rd layer of Bleach Gaenial Posterior with the fissure pattern and cusp lobes created with an Ash 6 probe
- White nano-composite placed on cusp lobes



Aesthetic Composite Reconstruction

- Completed case



Aesthetic Composite Reconstruction



Aesthetic Composite Reconstruction



Ribbonid appears mottled in Radiographs

