Preventive resin restoration

Preventive resin restorations were first described a long time ago in paediatric dentistry. Today the technique is still very pertinent, and has been extended to include teenagers and adult patients. New flowable composites have made it possible to extend the indication area for preventive resin restorations. Although mostly considered as a base material for posterior restoration, flowable composites are now proving very useful for many different types of minimally invasive cavity preparations such as carious fissures.

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3M™ ESPE™ materials used:
3M™ ESPE™ Scotchbond™ 1 Dental Adhesive
3M™ ESPE™ Filtek™ Flow Flowable Composite
3M™ ESPE™ Filtek™ Z250 Universal Restorative

The patient presented with infiltration of the fissures and an eroded amalgam.

The decayed fissures were opened using special burs, allowing the retention of healthy tissue to be maximised. The amalgam restoration was removed.

The dentine was properly cleaned of carious tissue.

The adhesive was forced down into the deeper parts of the fissure using disposable applicators and then combined with Filtek Flow composite, thus any excess is visible and can be removed. In the cavities only the adhesive was placed. Then the area was light cured.

The margins were prepared. Scotchbond 1 adhesive was then placed in the cavities and the fissures.

The occlusal areas of the fissures and the cavity are filled with Filtek Flow composite and light cured. Thus a layer of flowable is created which can absorb the stresses of polymerization shrinkage.

The cavities were filled with Filtek Z250 restorative for its mechanical properties, wear resistance and easy manipulation.

Post operative view with occlusion indicator.