Facing the isolation challenge of Class V restorations

8 Nov 2017

The Class V lesion is a common lesion in dental practice nowadays. These non-carious cervical lesions (NCCLs) are becoming more prevalent in the elderly population. The etiology of such lesions due to certain factors like an acid diet, occlusal stress and interferences (Abrasion, Erosion and possibly Abfraction) represents an important issue to be defined and treated accordingly.

Commonly, these kind of cervical lesions are not treated until the patient complains about dental pain/hypersensitivity or in those situations when it affects patient’s esthetics. It is vital to do a proper and early diagnosis to inform the patient about the causes and how to prevent a future recurrence.

The challenge of restoring these cavities with composites is a fact: severe loss of retention, change in the quality of the dentin (more sclerotic with the aging of the patient), absence of Enamel needed for optimal adhesion, and the management of occlusal interferences represent an issue for the dentist.

Common problems are the difficulty of ISOLATION (moisture control), the Application of material, the CONTOURING (access to subgingival margins), the FINISHING and polishing procedures.

This case report aims to present an optional technique to be used in the following situations:
– when the intrinsic anatomical and morphological characteristics of the cervical area create a limitation to apply the clamp. However, rubber dam isolation should be used whenever possible.
– when the tissue management with rubber dam isolation is limited due to lack of patient compliance (disabled and/or elderly patients).
The initial Situation of a non-carious cervical lesion (NCCL). The patient complains about some hypersensitivity, plaque retention and her aesthetic situation. After an appropriate evaluation of the cause and the etiology of the lesion, the patient decided to treat only the affected teeth knowing the factors of the occlusal patterns as a result of the early lost of some tooth structures.
The application of a double retraction cord into the sulcus is optional and depends on the depth of the sulcus. A non-impregnated cord is recommended if you use just a single cord technique. I personally apply a first cord #0 impregnated in Xylocain (Lidocain anesthetic gel), and a second completely dry one.
Fig. 3  The retraction cord's in situ and gives you a clear field to restore.
Choose the desired plastic tip for your LM Gengiva instrument according to the size of the lesion (S, M, L)
Try the tip of LM Gengiva instrument in the cervical area with slight pressure on the gingival tissue.
If necessary the tip can be cut and adapted with an abrasive disc.

Place the instrument and restore as usual (Etch & Rinse or 3 Steps technique, Single Bond System etc). We used 3M Filtek Supreme Flowable, as initial layer. With the next layers we add composite to build up the buccal contour.
Fig. 8  Finish the restoration with your LM Gengiva tip as protection on the cervical area using finishing diamond burs for contouring, and a final polish with discs and rubber polishers on the buccal area.
Fig. 9  Remove the retraction cords gently with a probe.

Immediate post operative image.
Optional: Check your color match with a cross-polarized filter.
Recall of the patient after 6 weeks to check the marginal integration of the restoration.

The treatment of cervical lesions necessarily involves some points to be considered: problem identification, diagnosis, etiological factor removal or treatment. Due to the multifactorial character, the NCCL it cannot always be treated straightforward. The use of the LM Gengiva instrument as a gingival retraction device is highly recommended in cases in which the use of rubber dam is compromised. The case presented above shows a different approach for specific situations. A successful diagnosis and restorative treatment plan requires a thorough patient history and careful observations and evaluations of the lesion.