Tooth-colored Inlays & Onlays: Clinical & Scientific Evidence

The reduction in the carious disease incidence and the growing concern of patients for potential toxicity of metals and dental aesthetics, have called the profession for developing restorative options adapted to new demands. Composites, ceramics and adhesive techniques have then become the foundation of modern restorative dentistry, following tremendous improvements in material mechanical performances, wear resistance and aesthetic potential. Composite resins are currently used in a broad range of situations, including the treatment of initial decays to the restoration of extended and serial cavities, including the aesthetic and functional rehabilitation of patients with severe tooth wear. However, polymerisation shrinkage of the resin matrix and in-mouth material application still are crucial issues which impose certain limitations to the use of direct techniques. Therefore, other restorative options such as semidirect and indirect techniques have to be considered for large and deep cavity configurations or non-vital teeth. The lecture will overview decision criteria for the treatment of posterior teeth using indirect techniques and will examine as well material choice in consideration to tooth biomechanical status, with special focus on the “cracked tooth syndrome” and non-vital teeth.

New, improved concepts related to tooth preparation and cavity lining, as well as luting procedures will be presented, which lead to a simplification of clinical procedures and superior results in indirect restorations.