Common Clinical and Laboratory Errors

Problem	Cause	Management
Poor marginal fit of the crown/ fixed bridge retainer Consequences include an increased risk of: • Plaque retention • Secondary caries • Localised periodontitis • Cement dissolution • Poor aesthetics	Clinical related: • Inaccurate impression • Poor gingival retraction • Inadequate marginal preparation Laboratory related: • Dye was damaged during pouring up of casts • Poor dye trimming • Inaccurate identification of the finish line • Casting bleb on the fit surface • Damage to adjacent teeth proximal surfaces during cast sectioning. The crown will not seat due to tight contacts • No dye spacer • Inaccurate wax up	Clinical: • Retake the impression • Re-define the margins, ensuring sufficient proximal and axial reduction Laboratory • Communicate the problem with the laboratory
Crown/fixed bridge retainer not seating Consequences include an increased risk of: • Patient discomfort • Plaque retention • Secondary caries • Localised periodontitis • If not identified, this may lead to unnecessary occlusal adjustments	Clinical related: • Inaccurate impression • Undercuts in the final preparation • Insufficient taper of the axial walls • Drifting/tilting of adjacent teeth due to loss of the temporary crown and the patient not seeking re-temporisation (e.g. if the tooth is previously root canal treated and asymptomatic, the patient is less likely to seek re-temporisation) • A poor/open contact point on a long term temporary crown can result in minimal drifting of the adjacent teeth, reducing the interproximal space available Laboratory related: • Damage to adjacent tooth dental stone • Dye abrasion caused by repeated crown insertion and removal • No dye spacer • Casting bleb on the fit surface • Poor dye trimming • Inaccurate wax up	Clinical: • Retake the impression • Check for undercuts in the final preparation • Ensure 4-6 degree tapered axial walls • Ensure good contact points on the temporary crown • Minimal interproximal reduction with a high speed handpiece • If the dye is worn, consider using 'occlude' spray to identify the undercut area on the tooth preparation • Laboratory • If it is unmanageable chairside, communicate the problem with the laboratory
Occlusal interferences of the crown/ onlay/bridge retainer/bridge pontic Consequences include an increased risk of: • Post-operative pain on biting • Occlusal trauma • Crown/onlay/bridge retainer/ bridge ponic fracture • Opposing tooth cuspal fracture • Decementation • Bruxism	Clinical related: • Inaccurate impression • Insufficient occlusal reduction • Inaccurate bite registration • Poor planning and clinical assessment Laboratory related: • Damage to the opposing tooth dental stone • No dye spacer • Casting bleb on the fit surface • Poor dye trimming • Inaccurate wax up leading to greater thickness of the retoration	Clinical: • Retake the impression • Ensure the appropriate occlusal reduction has been carried out. This depends on the material of the indirect restoration • If the casts cannot be hand articulated, take a facebow. Also, ensure translucency of the cusp tip areas in the set bite registration paste • Take a comprehensive occlusal assessment • Minor interferences can be adjusted chairside prior to cementation Laboratory: • If it is unmanageable chairside, communicate the problem with the laboratory