

REPLACING A FAILED CLASP OR ADDING VERSACRYL TO PARTIAL DENTURES TO IMPROVE RETENTION / AESTHETICS

There are a plethora of flexible materials currently on the market which claim to offer alternatives to conventional clasping. They are of the pink, white, tooth colour and clear nylon varieties. None of which bond chemically, can not be repaired or added too and all requiring specialised equipment to produce. In most cases needing to be outsourced adding to expense and lost of design control.

The application of these nylon retainers has not shifted much from conventional clasping, of which we have a choice of two, roach and c clasp. Nylon offers flexibility in long sections but does not have compressibility, which limits its use to lingual, palatal and buccal applications. Thus requiring relief of lingual, palatal and proximal undercuts. Resulting in lack of close fit (bracing), same as cast and wire clasp but with greater thickness so as to have some rigidity. It does not make sense to engage buccal, lingual or palatal undercuts which are at 90° to the forces of dislodgement, for retention purposes. Dislodgement occurs through the centre of the ridge (at long axis of abutment teeth). Proximal undercuts are the most prevalent and important and under utilised of all undercuts. A tooth's contour varies and it may lack buccal, lingual or palatal undercuts.

But some how proximal undercuts whether on anterior or posterior teeth, are nearly always present for our purposes of retention. We know to block out or relieve proximal undercuts, due to the non-compressive nature of rigid materials, leaving spaces inter-proximally for the denture to rotate around and for food to pack into (these relieved areas).

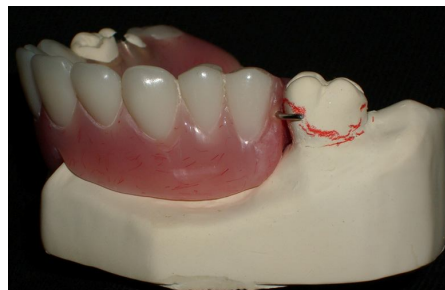
Now we have a material which bonds chemically to acrylics and its self, which is available in both self cure / heat cure in pink and clear, that does not require any special equipment to apply. Versacryl can be poured, moulded and packed. Versacryl can also be mixed to various consistencies of resilience / compressibility by varying the ratios of soft / hard liquids. Versacryl's compressibility is the feature which allows retention to be placed in the areas we have previously avoided, into the proximal undercuts. Engaging proximal undercuts prevents the denture rotating through the long axis whether distal or mesial, due to the close fit (bracing) of the Versacryl against the tooth surface while at the same time closing down food traps because we do not relieve the proximal undercuts. We can now use proximal undercuts to our advantage, unlike rigid non-compressive materials.

What about aesthetics? Proximal retention is not visible, sandwiched between the denture and the abutment tooth, it becomes part of the denture base and flange. Aesthetics is not an issue if there is nothing visible. So we can say proximal retention is invisible. The procedure for adding Versacryl to replace a broken clasp or simply adding Versacryl retention points (VRPs) to improve retention is as simple as mixing s/c acrylic and pouring. Also, there is nothing stopping you, the operator from using Versacryl directly in the mouth, once you have gained some experience in Versacryl's handling characteristics.

Don't be surprised if the patient comes back and ask you to take off the other clasps and replace them with Versacryl retention points (VRPs). After all, no one likes clasps neither you nor your patient. The best clasps are no clasps.



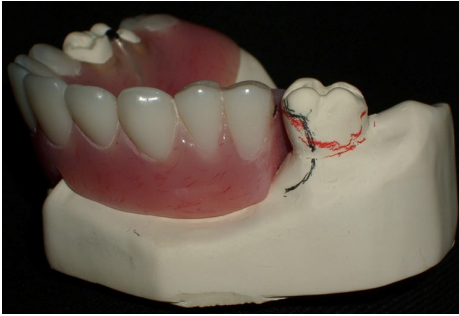
Conventional clasp retention. Note the space between denture & abutment tooth.



Clasp has failed. Note undercut is at the mesio-buccal. This clasp was ineffective anyway.



The undercut extends through the p[roximal and onto the mesio-palatal.



Trim out and roughen denture through the proximal. Note VRP outline.



And onto the palatal. Creating space for the VRP to compress into the undercut.



Separate the model and mark with dark pencil to indicate the depth of undercut (in this case 1mm) prime the repair area with hardener liquid place the denture back on the model mix and pour Versacryl.



As poured and processed. Versacryl can be trimmed with a sharp scalpel before placing into hydroflask for 15 minutes at between 45-60°C.



Pencil lines are picked up by Versacryl, making it easy to identify how much to trim. From gingival margin to junction of pencil line. This way the denture does not have to be warmed to insert and you don't have to guess depth of undercut.



As a bonus we get close fit (bracing) on the palatal aspect and retention as well.