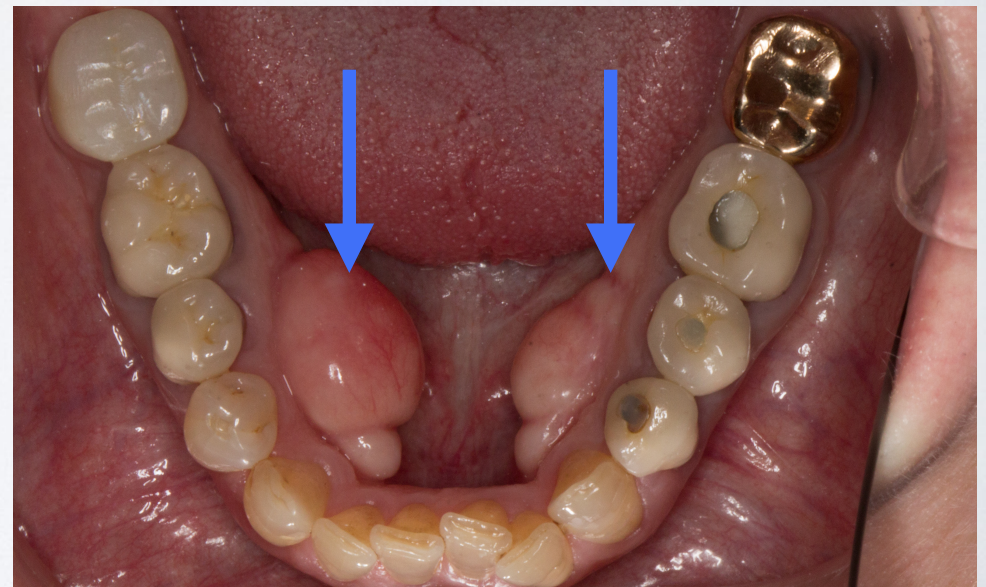
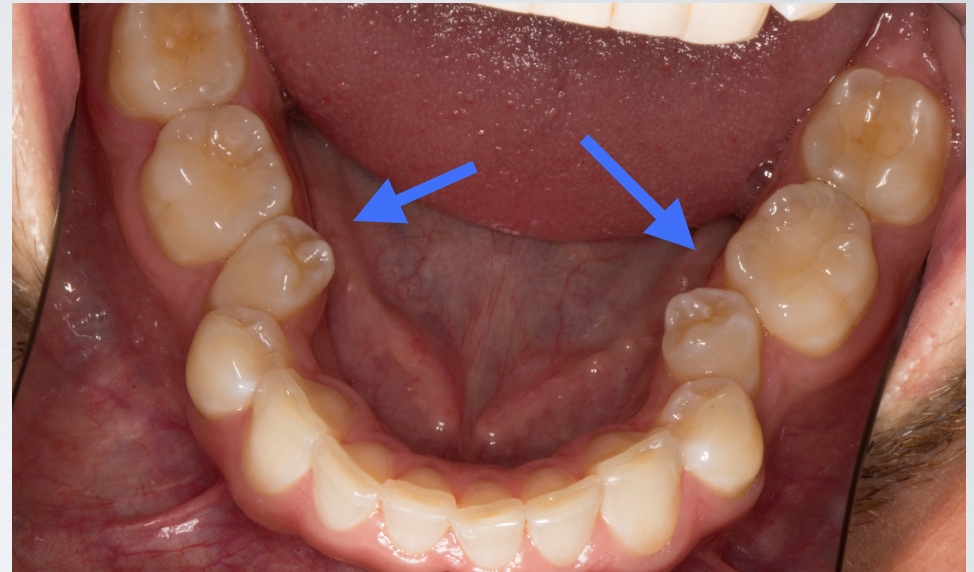


REPAIRS AND OTHER TIPS

Being able to predictably deliver results with same-day splints requires having a few tips to prevent weakness in the splint, and the skills to repair the splint if it does break.

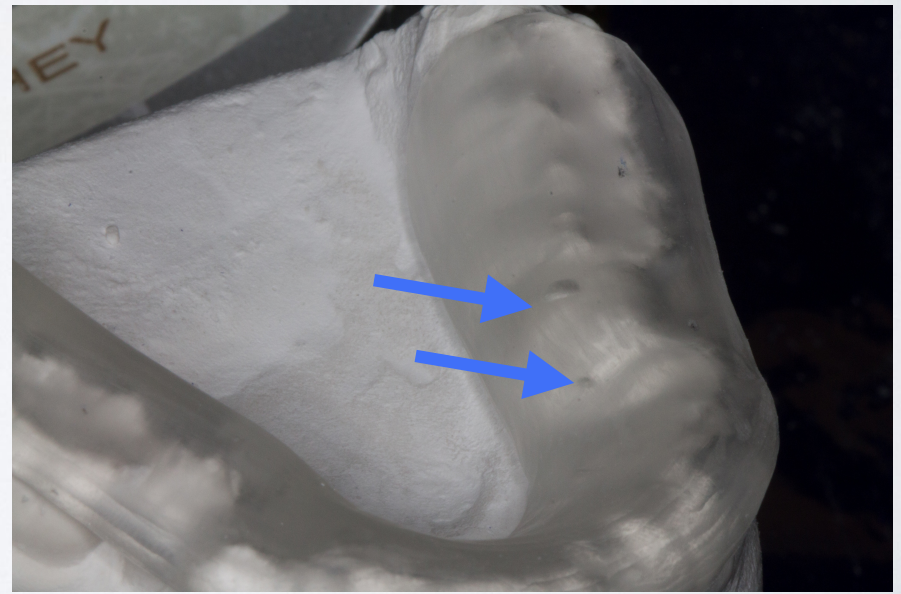
ASSESS CASTS FOR POTENTIAL PITFALLS

Mandibular tori and lingually inclined teeth need to be accounted for in the splint design. If nature buttressed the bone, shouldn't you? Plan to make the splint thicker on the lingual if so. Sometimes this augmentation needs to be done after initial splint fabrication is complete.



LINGUALLY INCLINED POSTERIOR

Here, the mandibular second premolars are lingually inclined. Application of the acrylic to these surfaces creates strain on the intaglio surface of the splint, causing small voids from the drag.



LINGUALLY INCLINED POSTERIOR

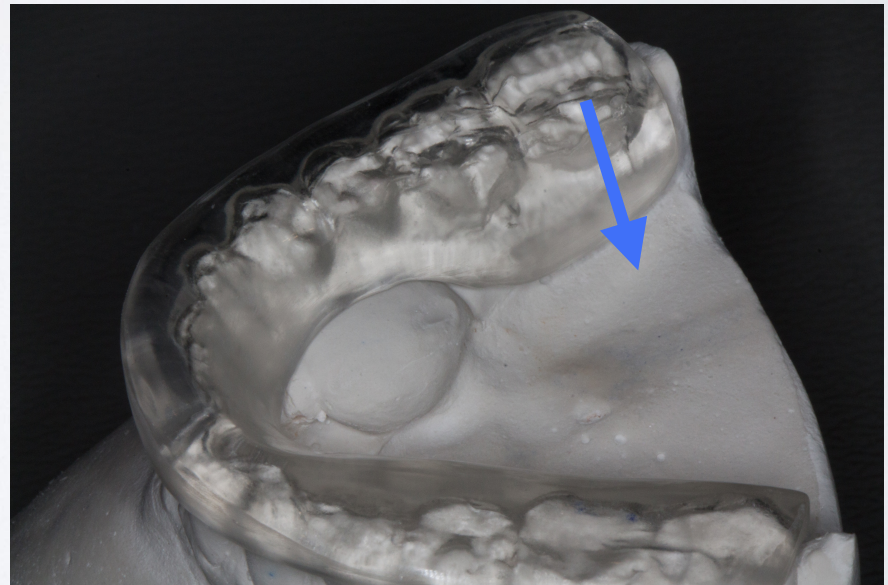
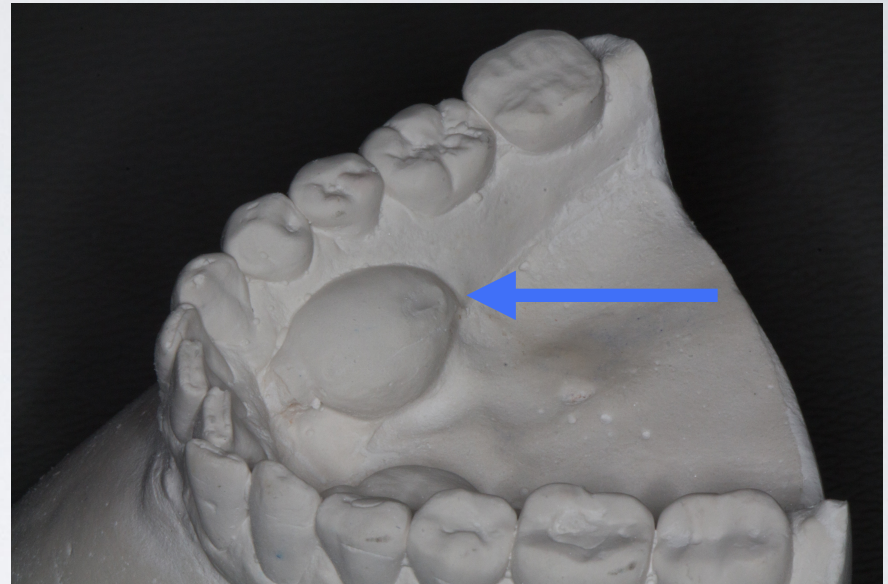
Rather than waiting to see if the splint can support the bite with the inherent weakness, be proactive and remove the void plus a wide margin.

Then use the same process of mixing BioCryl Ice acrylic, place within the repair, and cure in pressure pot.



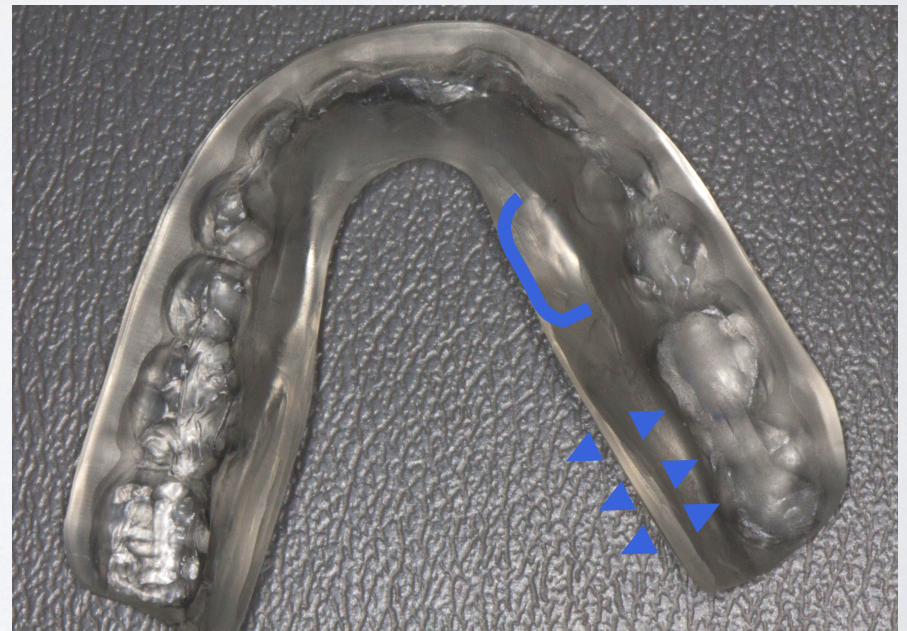
LINGUAL TORI MANAGEMENT

When tori are present, the splint is designed to leave them uncovered, as the tissue covering these bony exostoses is thin and the nerve supply is rich! The remainder of the lingual flange may need to go both lower and thicker (to account for the degree shorter it is) to have cross-arch resistance to flexure.



LINGUAL TORI MANAGEMENT

Arrows showing increased thickness in the posterior section of lingual flange; circular shape highlights the contour of the torus which the splint is just short of. This area will likely need to be shortened even further, in the mouth: have the patient demonstrate maximum clench after relines to ensure it does not injure the torus.



TWO-STEP PLANE OF OCCLUSION

When teeth are not at a similar vertical dimension, the overall splint dimension needs to make up for that difference. Begin with the goal that the splint 4mm so that by the time it has been modified for smooth anterior guidance, there is sufficient material to prevent fracture at the thinner portion.



OVERLY FLARED TEETH

Viewing the occlusal surface of a model can reveal the pitch of the lower teeth. Here, the lower anterior teeth are at a significant proclination. The difficulty expected is that the front teeth will not respond favorably to the pressure of seating and lifting the splint over the teeth, as that seating occurs at a different angle than over the back teeth.



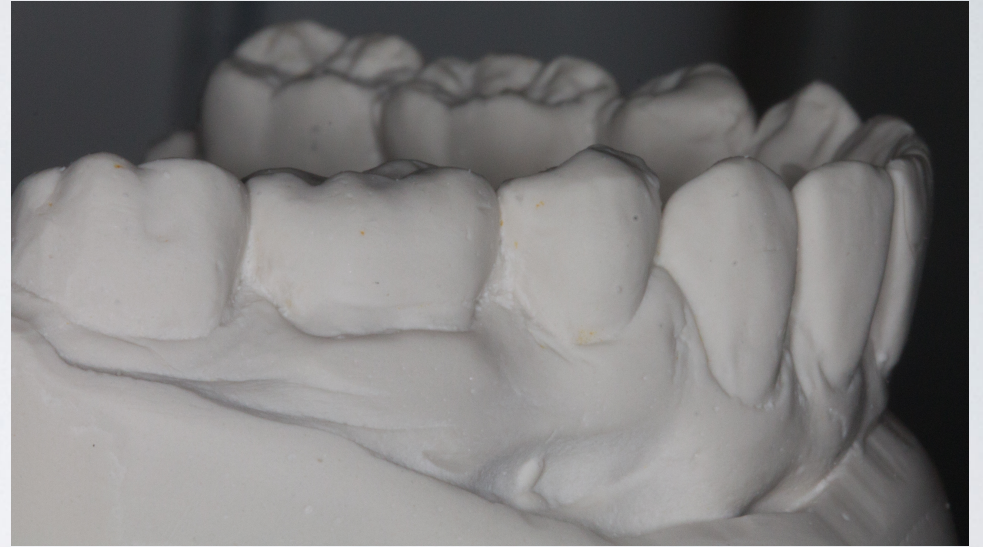
OVERLY FLARED TEETH

The solution is to create a shorter than usual degree of overlap (less than 2 mm) of the lower front teeth. The back teeth are covered to a greater degree, as the facial surface of the back teeth is the location of retention.



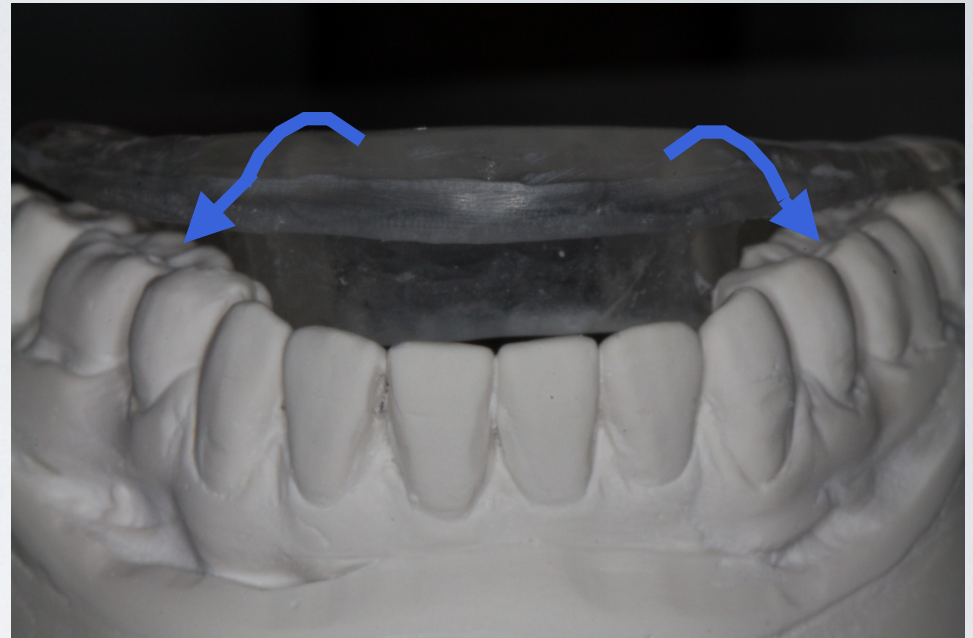
OVERLY UPRIGHT TEETH

A common outcome of extraction + retraction orthodontics is overly upright anteriors and lingually rolled posteriors. The shadow from the occlusal view shows the difficulty predicted in having a seat over the contours of the teeth and having adequate retention thereafter.



OVERLY UPRIGHT TEETH

The flange design on the lingual will be shorter than normal - the farther inferiorly it goes, the farther away from the bony support it will be. Instead, the splint will be fit from the posterior, rocking forward to the anterior. Note the increased overlap of anteriors relative to posteriors.



PROPER USE OF LATHE

The lathe is used for efficient reduction of excess acrylic. A wheel that runs true will create a smooth surface without excess vibration (which mars and burns the acrylic). True the Scotch-Brite wheel first, using a carborundum truing stone as shown.



PROPER USE OF LATHE

Hold the splint at right angles to the cutting surface to create smooth edges. It is best to use two hands but we had to photograph somehow!



REPAIR OF BROKEN SPLINT

First, ensure the pieces go back together perfectly. Next, superglue the pieces and hold for 7 minutes. Confirm the glue and check under microscope that the edges have completely lined up.



REPAIR OF BROKEN SPLINT

Once glue is set, create a silicone putty impression of the internal surface of the splint. Using the putty as a support, grind away the fracture. Add fresh acrylic to the missing segment, and cure. Trim the excess and relines again in the mouth.

