

Fitting Dolder bar clips into a denture using the cold cure method

Jo Stevenson guides us through with this step-by-step case study



This article demonstrates a method of fitting Dolder bar clips into a denture using cold cure acrylic after the denture has been processed. While I agree that there are other ways of fitting the clips – for example you might choose to include them in the heat curing process or select a chairside fitting by the clinician – I find that both of these alternative techniques can create problems.

Aim:

- To understand how and why the cold cure method might be the best way to fit Dolder bar clips into a denture

CPD Outcomes:

- Maintenance and development of knowledge and skill within your field(s) of practice.
- Technical areas of study.
- CPD specific for your daily role(s).

Development Outcome: C

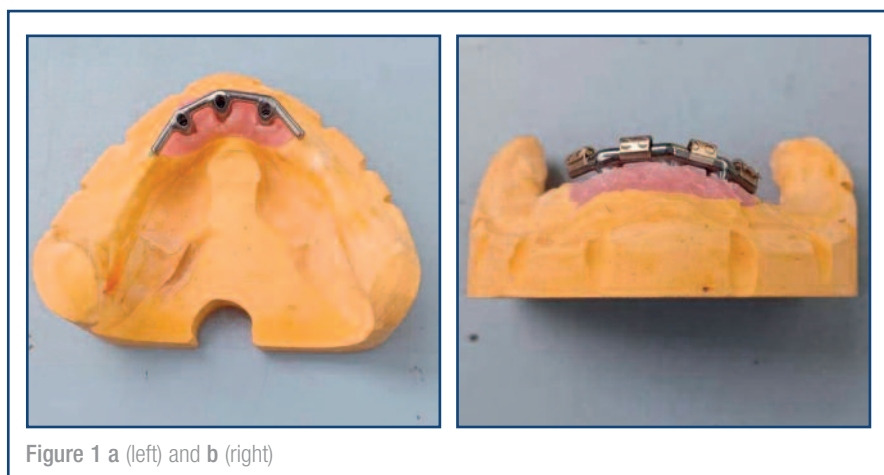


Figure 1 a (left) and b (right)

The clips might move during heat processing, or while fitting chairside the dentures can get stuck in the patient’s mouth if the bar is not blocked out correctly. Personally, I have found the cold cure method to be very accurate and

effective, plus it’s the least problematic, which is always a bonus in a busy lab. To start, a lab putty index is made of the wax try-in on the model to record the position of the teeth and gums. The Dolder

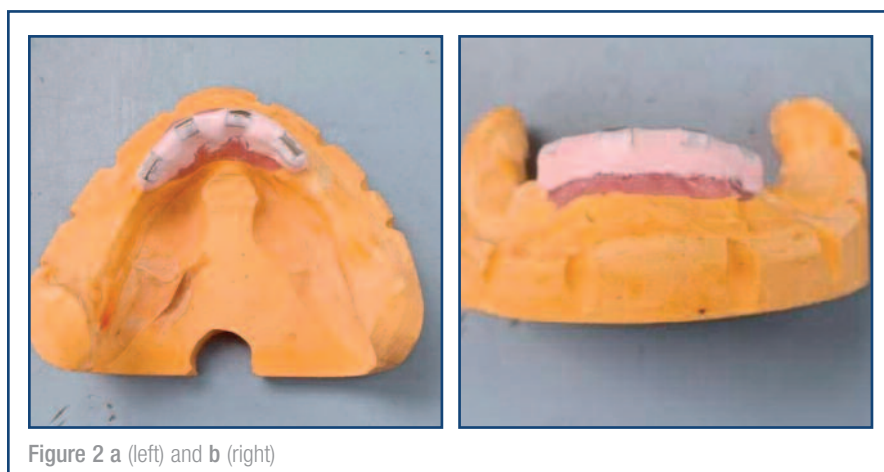


Figure 2 a (left) and b (right)



clips are cut to size and placed on the bar with metal spacers between them and the bar. The spacers are there to allow for compression of the denture in the mouth (Fig 1 a, b).

The Dolder bar and clips are then blocked out with wax. This is done so there are no undercut around the bar. At the top of the bar where there are no clips, the wax must be at the same height as the clips (Fig 2 a, b).

This helps ensure that – once the denture is finished – only the clips will be touching the bar and during compression no acrylic will get in the way, thus preventing the clips from engaging. The model is then duplicated (Fig 3).



Figure 4

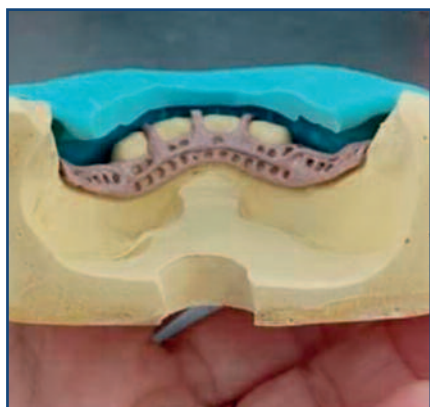


Figure 5



Figure 3

A chrome strengthener is then constructed over the blocked-out model, this will help strengthen the denture where the acrylic might be thin around the bar and clips (Fig 4).

The putty matrix must be placed on the model with the strengthener in place to assess the space where the teeth will be (Fig 5).

The teeth are then removed from the wax try-in and trimmed to fit around the blocked-out model and the chrome before being placed in the matrix (Fig 6 a, b). The

chrome strengthener is then fixed to the model with a small amount of cold cure to prevent it from moving during processing.

The putty matrix containing the teeth is secured on the model using a rubber band (Fig 7). Wax can then be poured into the mould and the denture waxed up ready for processing (Fig 8).

The bite should now be checked with the opposing denture to make sure nothing moved while transferring the teeth over. (Fig 9)



Figure 6 a (left) and b (right)

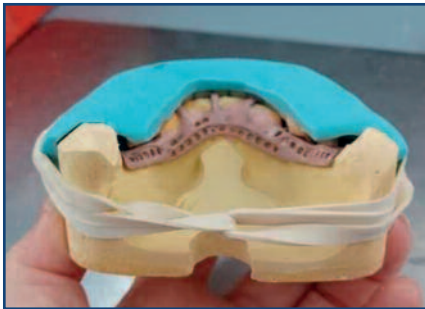


Figure 7

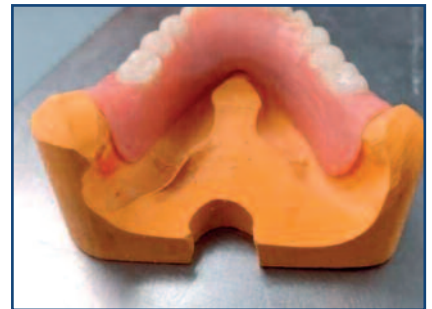


Figure 10 a (left) and b (right)



Figure 8

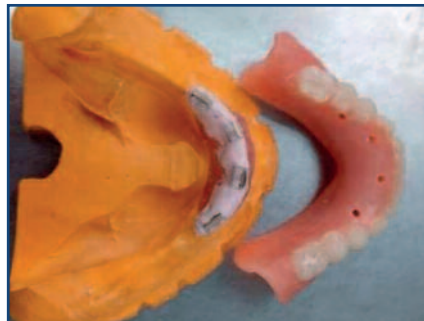


Figure 11



Figure 13



Figure 9



Figure 12

The denture is now ready for heat cure processing.

After the denture has been processed it is trimmed in the normal way and fitted down on the blocked-out model, making sure there is a passive fit over the blocked-out area (Fig 10 a, b)

Small holes are trimmed through the denture in the areas of the clips, this is to allow excess cold cure to be released, making sure it doesn't run over the fitting surface of the denture. (Fig 11).

The wax over the clips needs to be carefully removed using a scalpel, then steam cleaned to ensure all the wax has been removed before placing them back onto the bar - while making sure the metal spacer is still in place. (Fig 12).

Separating solution is painted onto the model and the cold cure acrylic is mixed.

A small amount of acrylic is pressed around the clips, making certain they will be very well secured (Fig 13), then the void in the denture is also filled with acrylic (Fig 14).

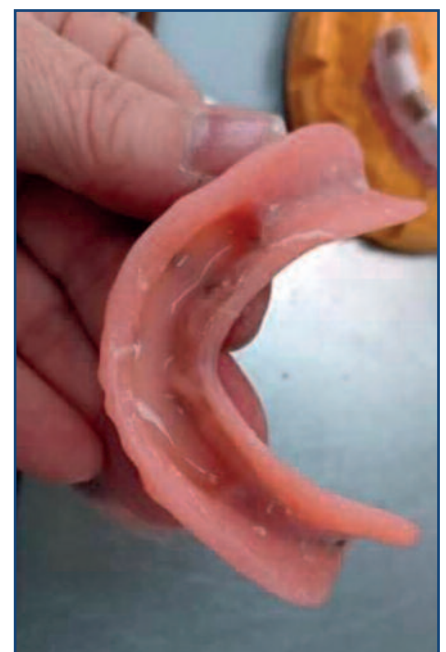


Figure 14



Figure 15

The denture is placed on the model and secured with rubber bands. At this point any excess acrylic that seeps through the holes should be left in place, as when the acrylic is curing it will flex back (Fig 15).

The denture is then placed in a hydro flask under pressure to cure. Once the acrylic has cured the denture can be removed from the model and any rough acrylic on the fitting surface is smoothed and tidied.

This is when any excess acrylic can be trimmed away from the outer areas of the denture (Fig 16 a, b) The block-out wax is removed from the Dolder bar and model and the fit of the clips on the bar and the occlusion with the upper denture should be checked, then in the final stage the dentures are polished ready for the patient (Fig 17).



Figure 17

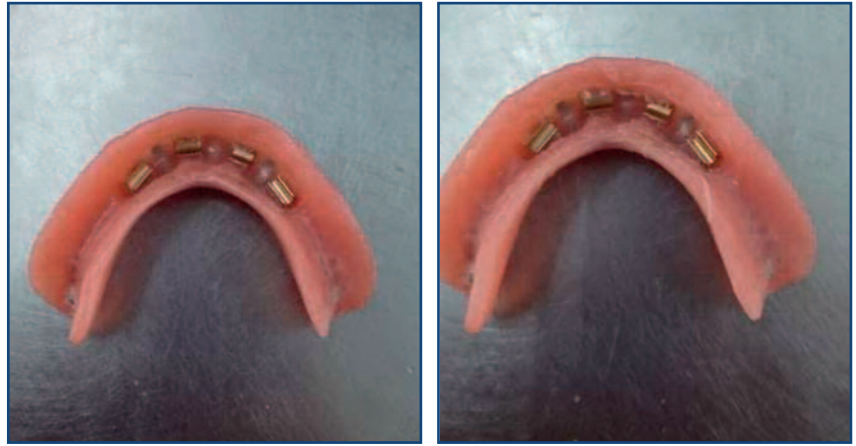


Figure 16 a (left) and b (right)

Development Outcome C - 30 mins

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Q1 Which technique does the writer believe is the best way to fit Dolder clips to a denture?

- A During the heat curing process
- B As a chairside fitting by the clinician
- C a) and b) are efficient and interchangeable
- D Using cold cure acrylic after the denture has been processed

Q2 Why is a lab putty index made of the wax try-in on the model?

- A To establish the interproximal spaces
- B To record the position of the teeth and gums
- C To correctly define any undercuts at the height of the gingivae
- D To determine the dental occlusion

Q3 Why are metal spacers placed between the Dolder clips and the bar?

- A To allow for compression of the denture in the mouth
- B To reinforce the denture during curing
- C To allow for the gingival width
- D To correctly define the position of the teeth in relation to the soft tissue

Q4 Why is a chrome strengthener used?

- A To stop the model distorting during manufacture
- B It is stronger than using a rubber band
- C To strengthen the denture where the acrylic might be thin around the bar and clips
- D To hold the teeth in place during fabrication

Q5 Why are small holes trimmed through the denture in the areas of the clips

- A To prevent air bubbles forming
- B To allow for expansion during curing
- C To ensure a passive fit over the blocked-out area
- D To allow excess cold cure to be released



**Don't forget
to reflect**