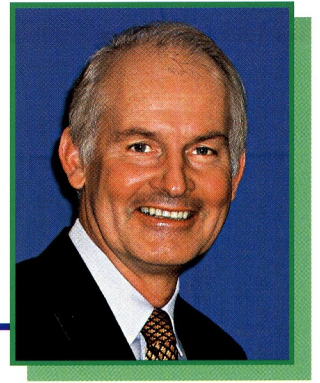


AESTHETIC Update



Compiled by Geoffrey M Knight

Direct NTI occlusal splints

Smart innovation often comes to dental technology and the NTI Splint* has been one of them.

The NTI splint is a small anterior occlusal splint that is remarkably effective and requires little post insertion adjustment. The only downside is the slight chance of developing an open anterior bite caused by the condyles moving upward and forward into the sockets, necessitating a minor occlusal correction of the posterior teeth.

They can be made either indirectly through a laboratory or equally well, directly in the operatory, saving substantial amounts of time and money compared to the indirect technique.

The procedure described can be done in the operatory, in a 10 minute time frame and helps use up the left over, shade A6 composite resin from the kit purchased at a dental show several years earlier.

It is useful to demonstrate to patients how the splint works before constructing it.

Ask patients to place their fingers over their cheeks and clench their teeth to feel the masseter muscles contract.

Next place the end of a mouth mirror handle between their anterior teeth and ask them to clench again. They will find it is difficult to fire their masseter muscles, demonstrating the potential of the splint in reducing their clenching habit.

CLINICAL TECHNIQUE

Suitable for patients requiring splint therapy who have healthy anterior teeth.

- Try in the NTI blank to confirm it fits into the patient's occlusion. Mark the lateral incisors with a lead pencil to act as a guide when the loaded splint is inserted into place (Fig 1).

- Use a 'cold cure' acrylic liquid (Fig 2) to paint over the inside surfaces of the blank with a micro brush (Fig 3). This will loosen the acrylic chains from the surface of the blank.

- Paint the inner surface of the blank with composite bonding resin (Fig 4). This will enable the composite resin to bond to the acrylic blank.

- Load the splint with composite resin judging that there is a slight amount of excess once the splint has been inserted. Place a 3cm square of freezer bag over the composite resin. Using the pencil markers as guides slowly jiggle the splint into place and ask your patient to bite gently on their back teeth. Use the freezer bag to fold excess composite resin over the blank with a plastic instrument prior to curing reduces finishing (Fig 5).

- Photocure the outer and lingual aspects of the splint for 10 seconds each (Fig 6).

- Remove the splint and photocure the fitting surface for 10 seconds through the freezer bag (Fig 7).

- Contour the margins with an extra course Moore's emery disc (Fig 8).

- Reduce the occlusal bar with a disc to just clear the occlusion (Fig 9).

- Patients find the labial extension of the blank irritating and if the occlusion is not compromised reduce this extension (Fig 10).

- Polish the margins and outer surfaces with a rubber cone (Fig 11).

- The completed splint (Fig 12).

- Splint inserted (Fig 13).

- Incisal view of inserted splint (Fig 14).

This splint manufacturing technique is predictable and extremely efficient. Eliminating the laboratory and the need for adjusting the splint once it's inserted makes it possible to reduce the fee for providing a splint and make a substantially higher hourly return than using the indirect technique.

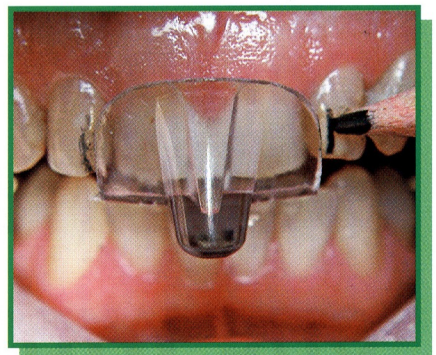


Fig 1. Try in the splint blank and use a pencil to mark the lateral incisors as a seating guide.



Fig 2. Use cold cure acrylic liquid to soften the inside surface of the blank.

* Amalgadent Dental Supplies (Australia) Pty Ltd, PO Box 279, Caulfield South, 3162.

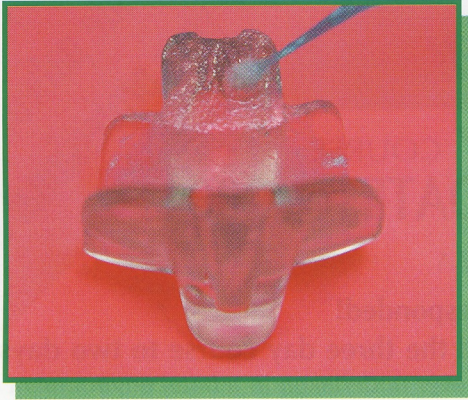


Fig 3. Paint cold cure acrylic liquid over the inside of the blank using a micro brush.

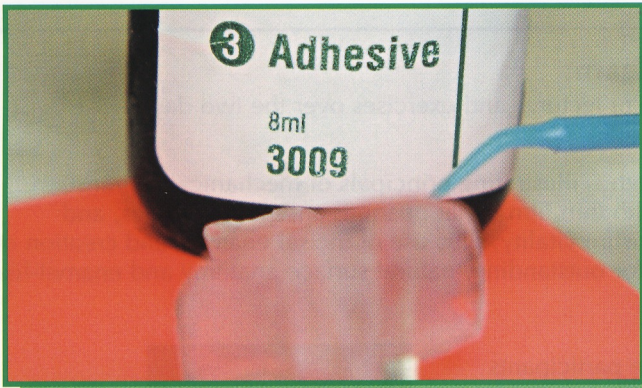


Fig 4. Paint over the cold cure liquid with composite resin bond.

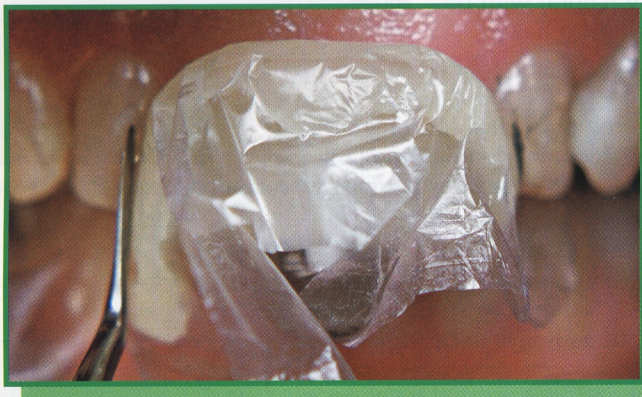


Fig 5. Load the blank with composite resin and place a freezer bag over the top before jiggling it into place, using the pencil markers as guides.

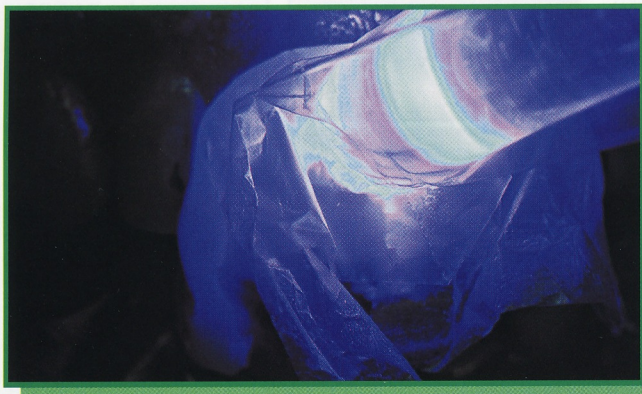


Fig 6. Photocure the outer and lingual surfaces of the blank for 10 seconds each.

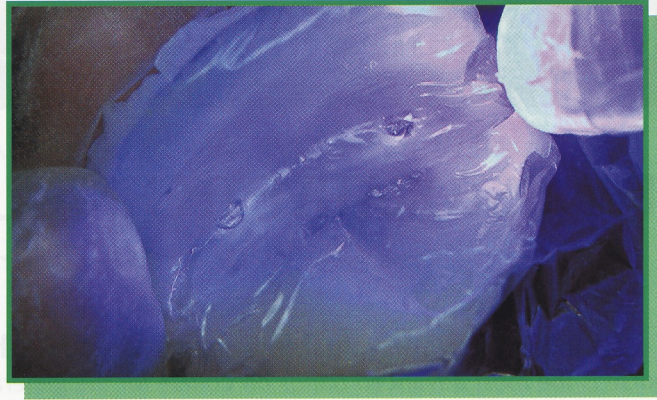


Fig 7. Remove the splint from the mouth and photocure the composite for a further 10 seconds through the freezer bag.



Fig 8. Contour the margins with an extra coarse Moores emery disc.

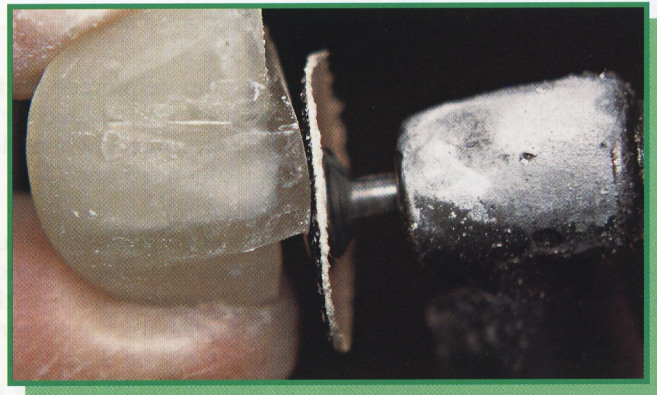


Fig 9. Reduce the occlusal bar to just clear the occlusion.

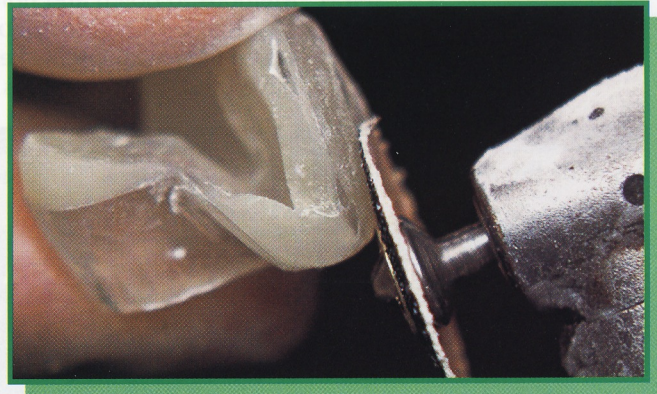


Fig 10. Reducing the labial extension makes the splint easier to wear.

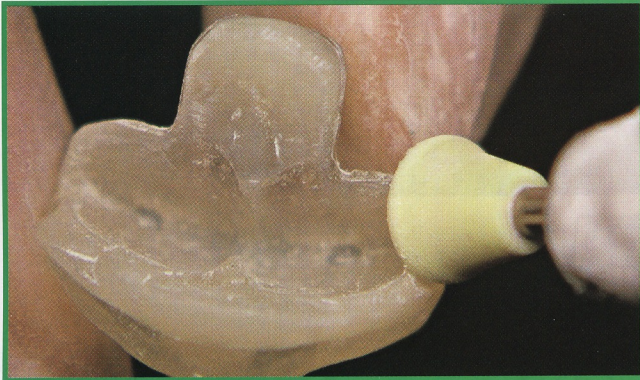


Fig 11. Polish the splint with a rubber cone or wheel.



Fig 12. The finished splint.



Fig 13. Splint inserted in the patient's mouth.

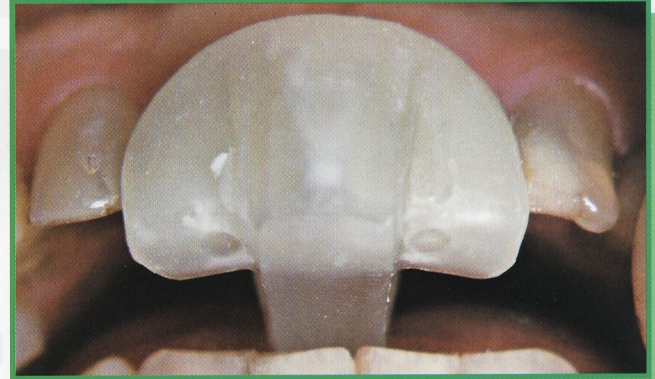


Fig 14. Incisal view of inserted splint.