

TELESCOPIC DENTURES AN OVERLOOKED TECHNOLOGY

Rob Jukes explains the benefits of using a telescopic denture and details a successful restoration case

For the replacement of missing teeth, dental professionals have relatively few options: dentures, bridges or implant-retained dentures. Dentures are often unsatisfactory usually due to problems experienced by patients, because of the lack of retention. Also, many patients are not happy with full coverage of the palate. Implants are often an expensive option and there may

not be enough bone for their placement without bone grafting. In addition, some patients cannot tolerate the thought of oral surgery undertaken in placing implants. In other cases, there may not be enough teeth present to support a bridge. Furthermore, patients who have lost their teeth due to poor oral hygiene may suffer the same problems with fixed solutions offered by implants or bridges. A removable solution often facilitates the maintenance of oral hygiene.

However, I found a technology that is rarely used in the UK, but commonly used in Germany, Switzerland and Sweden that offers an excellent alternative overcoming all of the above problems: telescopic dentures.

TELESCOPIC DENTURES

Although I had heard of dentures mounted on telescopic crowns at dental school, I had forgotten about it - mainly because it was not available on the NHS. I rediscovered this treatment modality at the World Aesthetic Congress at the stand of CDC Telescopic Dentures (Figure 1).

These dentures are produced by a German dental laboratory whose aim is to make this much-loved technology available in the UK. They explained to me that, although not necessarily the cheapest option, telescopic dentures are actually supported by the German government's health system because they have proved to be such a successful long-term solution for patients. I was particularly impressed by the retention on

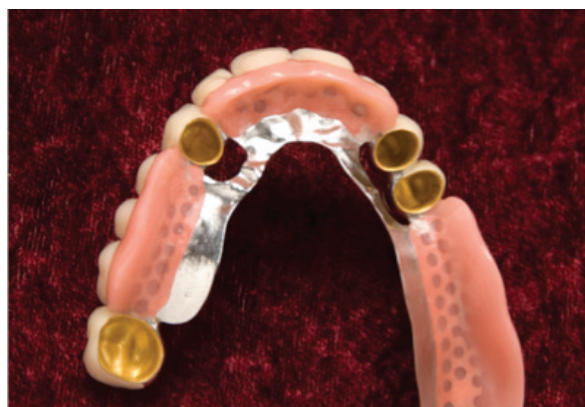


Figure 1: A telescopic denture

the sample models.

The technique requires at least two healthy teeth that are suitable for crowning. The teeth are prepped slightly more aggressively than for a normal bonded crown, because you have to allow for a double thickness of gold. Primary gold crowns are made to the dies to fit the prepped teeth and are milled parallel to each other. Secondary gold crowns are made by plating the first crowns, this ensures they fit precisely over the primary crowns. The secondary crowns are welded to a precision chrome denture framework. Finally, composite teeth and acrylic gingiva are fused to the framework.

Retention on the model is fabulous but, with the addition of saliva, the dentures become very difficult to remove.

INITIAL SITUATION

In this case, the patient treated was a 65-year-old lady. Her previous dentist had placed bridges on all posterior teeth on both upper left and lower right arches. With time, these



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Figures 2a-c: Preoperative view. Posterior teeth are missing



Figure 3: Primary gold copings to be placed on LL3 and LR3

had failed and all posterior teeth were now missing (Figures 2a-c). She had an upper chrome denture, but didn't like the clasps on the canines and always found it loose. She also expressed a preference for whiter teeth.

Examination found no caries and no periodontal disease. The patient did show significant wear on her non-crowned upper teeth and her lower incisors. Both upper canines were crowned and vital. She was deemed to be low risk for caries, periodontal disease and dentofacially (aesthetics). Because of the wear and the lack of posterior support, we classed her as a moderate risk from the point of view of occlusion.

TREATMENT PLAN

The treatment plan was as follows:

- To increase the occlusal vertical dimension (OVD)
- Restore the upper incisors with crowns and veneers
- Use the upper canines for telescopic crowns to retain an upper telescopic denture
- Restore the lower incisors with composite resin.

All possible treatment options were discussed

with the patient, including regular dentures and implant-supported restorations, but she was particularly keen to go ahead with the telescopic denture.

TREATMENT

A Kois Deprogrammer was constructed and worn by the patient for several weeks. Once she was deprogrammed, a bite was taken and a wax up was made for all six anterior teeth. All upper teeth were prepared and provisionals were made and adjusted.

We had decided to make the denture and the veneers separately. Therefore, the provisionals were removed from the canines, then impressions and a bite registration were taken and sent to the CDC lab in Germany. The provisionals were replaced following this.

At the next stage, the primary gold copings were received from CDC (Figure 3). These were tried in and their relationship to each other was checked using a Duralay Jig, also provided by the lab. Once the accuracy was confirmed, the laboratory went ahead and constructed the final denture. CDC is also happy to offer dentists the possibility of checking aesthetics with a trial denture before completing the final denture.

Fitting was done in two stages 24 hours apart. Once the individual components had been checked for fit and bite, the insides of the secondary gold copings (those welded into the denture framework), were greased with Vaseline to ensure that no cement got between the primary and secondary copings. The primary copings were then inserted into the secondary copings.

Next, cement was applied to the insides of the primary copings and the whole prosthesis was fitted. As much excess cement as possible

was removed and the patient was sent away with instructions not to attempt to remove the denture and just apply normal oral hygiene measures until her next appointment the following day. Up until this point, the patient had been wearing the Kois Deprogrammer to maintain her condylar head position.

TREATMENT OUTCOME

The denture was removed at the next appointment and the remainder of any excess cement was cleaned up. It is important that this fitting procedure is followed, as the fit and retention of the denture is so good that there is a risk of pulling the primary copings off the teeth with the denture. It takes a couple of days for the patient to learn the unique path



Figures 4a and 4b: Patient's final telescopic dentures created by the CDC lab in Germany



Figures 5a-c: Postoperative images

of insertion and removal, but this is a small hardship they are willing to undergo in order to gain a denture that gives them a feeling of confidence and a secure fit.

After the denture fitting, the definitive restorations were undertaken on the upper and

lower anterior teeth (Figures 4a and 4b). The patient was very delighted with the outcome of the treatment (Figures 5a-c).

It was one of those rare occasions in dentistry when I gained the impression that I had really changed her life!

For further information, please contact In-Line Orthodontic UK on 0121 244 0827 or visit www.in-line.co.uk

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