

## The making of a modern specialist society

**Paul Ward** Chairman of The British Lingual Orthodontic Society (BLOS), discusses the advantages of the lingual system

As dentists, most of us would agree that natural teeth in the best possible alignment and a functioning bite is usually better for our patients than a make-over smile. Orthodontics augmented by restorative work (crowns/bridges/implants etc.) representing multidisciplinary care produces great, healthy, long-lasting results and happy patients.

The mere mention of the word 'braces' to most adults, however, brings back memories from childhood of 'years' of orthodontic treatment. Orthodontics today is different in so many ways. As a profession, we are more tuned in to our patients' wishes and adult patients, a relatively new phenomenon in the orthodontic field, tend to be very specific about what they want to achieve.

Orthodontic treatment has moved on at an incredible pace and new technology means faster, more comfortable and healthier treatments for children and adults, with only the most complicated problems taking longer than eighteen months to treat. The combination of fixed and removable retainers after treatment ensure that the teeth remain aligned and won't move with normal ageing. So long-term results are possible for all ages.

Evidence suggests that the best orthodontic outcomes are achieved when treatment is provided by Orthodontic Specialists using fixed appliances. Most teenagers are prepared to accept metal-coloured fixed braces on the outer

### Case 1



Figure 1: Pre-treatment



Figure 2: Rapid alignment of upper labial segment over three months. Initially not enough space for brackets on all anterior teeth



Figure 3: Space created with fixed appliance so brackets could be bonded



Figure 4: Post treatment

**Case 1:** A female in her fifties disliked her teeth but didn't want labial braces as she is a teacher. Mild bimaxillary proclination but did not want to correct this. Heavily restored dentition.

**Plan:** Non extraction. Align using fixed upper and lower lingual appliances with interdental stripping for space creation and labial segment aesthetics.



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surface of their teeth because many of their peers will be having treatment at the same time. A significant improvement on this would be a fixed brace made of a tooth-coloured ceramic. These are still visible but much less so than a metal brace making them a common choice for older adolescents.

### So where does this leave adults?

Fortunately there is an answer and it comes in the form of lingual orthodontic treatment. A 2009 survey by Ipsos MORI of 877 people in England and Wales, aged 15 and over, was commissioned by the British Lingual Orthodontic Society ([www.blos.co.uk](http://www.blos.co.uk)). This was to assess awareness, attitudes and experience of orthodontics with a focus on braces

behind the teeth. The most important finding was that 72 per cent of people are unaware of invisible lingual braces.

The technique dates back to the 1970s but at that time had some significant disadvantages; mainly speech problems and discomfort. As such, it wasn't widely accepted. In the last ten years, however, new systems have been developed using computer aided design to produce bracket 'systems' which sit very close to the inside surface of the teeth.

This has several advantages; the appliances are more low-profile, improving patient tolerance and comfort. Computer programmes have made the use of these appliances easier for the orthodontist. This gives the specialist total control and allows him or her to deliver

## Case 2



Figure 5: Labial view showing lateral open bite

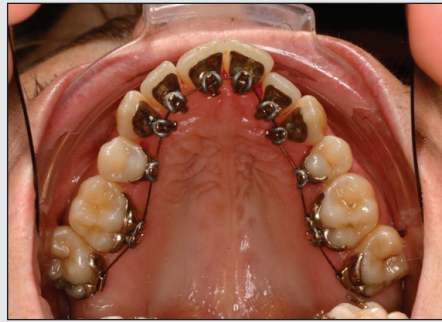


Figure 6: Treatment underway

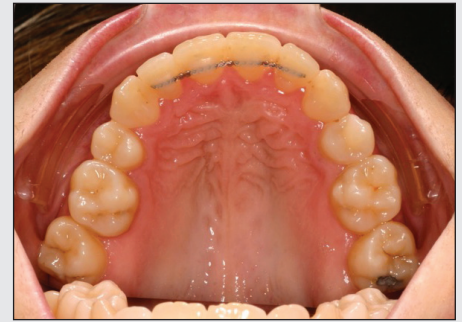


Figure 7: Post treatment with bonded retainer



Figure 8: Post treatment with good alignment and acceptable occlusion

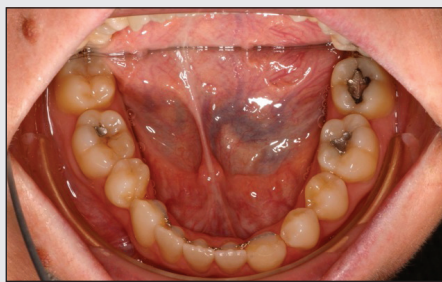


Figure 9: Post treatment: Occlusal view showing lower bonded retainer and canine substitution in lower labial segment

### Case 2

The patient was a female in her early forties. She had always disliked teeth but not aware that orthodontics could be done on adults and not aware of invisible treatment.

Complex case with no previous orthodontic treatment but previous extraction of UR4, LL4, LR4 and lower incisor to camouflage problem leaving her with a poor occlusion, lateral open bite on the right side and an anterior open bite of skeletal origin. To finish the case to class I molars on the left and right and class III canine relationship on left. To use the LL1&2 as LCL

### Plan

- Upper and lower treatment with lingual appliances.
- Non extraction but previous loss of teeth as above.

Treatment time: 22 months

the great results that they are capable of with other types of fixed brace. Treatment outcomes and duration are similar to more conventional techniques. Lingual orthodontics has now ceased to be a niche practised by the select few. In combination with this, increased marketing of 'invisible' aligner systems has raised awareness amongst the public and the demand for invisible orthodontic treatment for adults has escalated dramatically in the last few years.

The main advantage of the lingual system is obviously that it is virtually invisible. This means that treatment can be completed without anyone else being aware. This appeals particularly to those who interact with the public, such as teachers and police officers and anyone who is routinely on public view such as

actresses, models and presenters. For BLOS members, they are now a mainstream treatment option for adults and frequently the first choice for them and their patients.

### So, where does this leave younger patients?

Older adolescents enjoy the aesthetic advantages of lingual orthodontics and the absence of attachments on the front of the teeth may help brass instrument players. One of the main benefits for young people is to the health of the teeth during treatment. A small risk of orthodontic treatment is decalcification. If severe, this can lead to severe discolouration and ultimately cavities. The cause of this problem is related partly to poor oral hygiene during

treatment and partly to dietary sugar and acid. If the braces are fitted on the outside of the teeth, then the marks would be visible on the outside. If fitted on the inside then any marking, although undesirable would, in theory, be on the inside.

Recent research (Van der Veen MH et al, 2010) looked at groups of adolescent orthodontic patients who had a mix of lingual braces on one set of teeth and labial braces (on the outside) on the opposing set. The presence and size of decalcification before and after treatment was measured. The results were interesting. Those with lingual braces had no marking on the outside, visible surfaces of the teeth and any marking on the inside there was four times less. This can be partly explained

by the cleaning action of the tongue and saliva on the lingual braces.

## An orthodontic revolution?

The increase in demand for this style of treatment has necessitated a change in the training pathways for orthodontic specialists and a change in the dissemination of information about this complex subject to the public

The British Lingual Orthodontic Society (BLOS) is the UK's only society dealing exclusively with lingual orthodontics and is affiliated to the British Orthodontic Society. The aim of the society since its inception in 1995 was:

- To provide an organised community for orthodontic specialists who practice lingual orthodontics
- To represent lingual orthodontics and orthodontists in the UK
- To promote excellence in this field by continuing to raise standards
- To provide a source of evidence supported information for the general public to allow them to make the right choices about their treatment
- To provide a way to find a lingual orthodontist in your area.

The society has changed and grown with the needs of its members and the public to reflect the dramatic increase in the demand for invisible treatment for adults and children.

At the core of the society is the committee of ten experienced lingual orthodontists who meet four times per year to manage the running of the society. Within this structure, there are various sub-groups who coordinate the current projects.

## Highlights for 2010 included:

- A doubling of the number of members to the society from 2009.
- A new website with updated information for the public on access to specialist lingual orthodontists.
- Updated members' pages with information on subjects covering marketing, consent and news.
- Affiliated suppliers pages giving our members information on new developments and products.
- Information pages on courses on lingual orthodontics.
- A successful annual meeting in Birmingham on 'Lingual ingenuity'.
- BLOS were the co-organisers of the European Lingual Orthodontic Society (ESLO) meeting in London

One of the biggest developments ahead will be the introduction of a two-tier membership enabling BLOS members to achieve accredi-

## Case 3



Figure 10: Pre-treatment



Figure 11: Labial pre-treatment view showing midline diastema



Figure 12: Upper bonded permanent retainer to hold diastema closure and rotation



Figure 13: Post treatment

## Case 3

The patient was a female in her twenties who was getting married in six months time. She hated the gap between her teeth. She was unaware of invisible braces until she saw an advert in a magazine.

## Plan

The patient only wanted upper treatment. Therefore compromise treatment option.

- Non extraction
- Alignment and close upper diastema prior to wedding
- Appliances left on until after wedding as invisible
- Treatment time: Nine months total.

tation by submitting cases for accreditation. Much time has been invested in this to ensure parity between all the worldwide lingual orthodontic societies.

The format will involve submission of three orthodontic cases treated with lingual appliances on all teeth involving extraction and non-extraction based treatment plans with the aim of demonstrating clinical excellence. Cases will be submitted once per year and will be assessed against a standard and established set of criteria by an experienced panel of judges. Only those candidates who achieve the highest standards will become BLOS accredited. Cases will be submitted in the same format as the European Society of Lingual Orthodontics and the World Society of Lingual Orthodontics to allow successful candidates to apply for these accreditations should they wish to do so.

First applications for examination will be at the 2011 BLOS study group meeting in November. The guest speaker at this event will be Dr Dirk Wiechmann, inventor of the Incognito lingual orthodontic system, used by many UK and European lingual orthodontists. This is a great honour for the society. For more information see website: [www.blos.co.uk](http://www.blos.co.uk) **A**



## References

Van der Veen MH, Attin R, Schwestka-Polly R, Wiechmann D. Caries. Outcomes after orthodontic treatment with fixed appliances: do lingual brackets make a difference? *Eur J Oral Sci* 2010; 118: 298-303