The wonders of teeth-whitening treatment!

Giving the people of Liverpool beautiful teeth behind happy, confident, smiles says Dr Daz Singh BDS

In the heart of Liverpool city centre sits a unique, award-winning cosmetic dental clinic. Ollie & Darsh is the most exciting new cosmetic dentist around and has a simple ethos: to provide the people of Liverpool with beautiful teeth behind happy, confident smiles. With a range of treatments available to help members achieve and maintain the best possible dental health, Ollie & Darsh prides itself on its professionalism, skill and relaxed, stress-free environment. This isn’t just an idle claim either: last year Ollie & Darsh received the Most Attractive Practice award at the Private Dentistry Awards 2009; a fantastic achievement for any dental practice old or new.

Confidence to smile

Ollie & Darsh offers an extensive range of treatments designed to give confidence to patients and peace of mind with regards to dental hygiene and general oral health. Dr Daz Singh BDS, is the Co-Clinical Director at Ollie & Darsh, and is passionate about furthering his learning in the field of dentistry, having learnt under the guidance of internationally renowned dentists in both the UK and the USA.

A highly popular and relatively new form of cosmetic dentistry is teeth-whitening. Dr Singh decided to introduce this treatment at Ollie & Darsh and explained why, “Whitening treatment has become very popular and is one of the most frequently requested forms of cosmetic treatment. In today’s society, people are increasingly aware of not only the health of their teeth, but also their aesthetic appeal. As a result of this, myself and doubtless many other practitioners have noticed a sharp increase in the demand for teeth-whitening treatment. We offer clients three extremely effective teeth whitening treatments, all of which are approved by the British Dental Health Foundation. The latest “laser” whitening technique is called Zoom 3D Advance as it is without doubt the quickest way to lighten your teeth by up to ten shades.”

Choice of suppliers

There are many whitening products available on the market today, so the choice of suppliers is potentially enormous. How did Dr Singh decide which supplier was right for his practice?

“When deciding on which supplier to use, it was an easy decision. I chose Discus Dental. Having used and experienced the products from Discus Dental for many years now, I have always found them to be easy to use, highly effective and good value for money; I saw no reason to look elsewhere. I am currently using Zoom 3D Advance at Ollie & Darsh, which is the most recent addition to the Zoom range, and, having used the previous versions, I felt comfortable and confident that both my clients and myself would benefit from using it. Discus Dental is well known for whitening products and is, in fact, the world leader in this category. The company seemed like an obvious choice, and the fact that I have had positive, first-hand experience of working with them made my decision all the easier.”

Whitening Wednesdays

As with the introduction of most new concepts, intelligent marketing plays an integral role. Due to the fact that many other dental practices offer whitening treatment, it was essential that Dr Singh thought carefully about the best way to go about promoting Ollie & Darsh’s own unique teeth-whitening service. He explains, “I was aware of the need to make our whitening treatment stand out amongst the crowd of other clinics offering the same service, and, as a result, the marketing was given a lot of thought. After much consideration, we decided on promoting our whitening treatment by offering 50 per cent off Zoom 3D Laser Whitening every Wednesday. We called it Whitening Wednesdays.”
day and our aim was to attract our existing (and poten-
tial) members, by offer-
ing a very popular treatment for outstanding value once every week. The response was immediate and very im-
pressive! We have certainly seen a significant increase in our profits since the special offer incentive was launched and have experienced a notice-
able growth in client requests for whitening; we've even taken

the occasional referral from other clinics."

Client Feedback
With teeth whitening treatment in such high demand, how have clients at Ollie & Darsh respond-
ed to the ‘Whitening Wednesday’ incentive?

“The ‘Whitening Wednes-
day’ special offer has been a to-
tal success with clients. We’ve re-
ceived incredibly positive feedback from all our clients
who have had Zoom 3D Laser Whitening treatment and many more have booked appoint-
ments. What many people don’t know is that you only need a single 90-minute appointment to whiten and give sparkle to your smile. It’s an extremely efficient and effective form of treatment."

Having used Discus Den-
tal as suppliers for the teeth-
whitening product Zoom 3D, Dr Singh offers an insight into working with Discus. “Hav-
ing used Discus Dental as sup-
pliers before, I was confident that my experience this time around would be just as positive, and I wasn’t disap-
pointed. They have a highly efficient team and the direct sales models means that Discus Dental can remain in direct contact with you. There is no one in the middle and there are no marked up fees, which is great. Discus Dental also maintains direct access with the manufacturer enabling them to address your specific queries and concerns.”

‘We have seen a in-
crease in our profits
since the special
offer incentive was
launched and have
experienced growth
in client requests for
whitening.’

Having successfully laun-
ched, marketed and reaped the financial rewards of a new treat-
ment within the practice, what advice would Dr Singh have for other practitioners musing on following suit?

“I would encourage any dentist considering launching a new treatment like whitening, to think carefully about the way in which they plan to market it. It’s such a crucial aspect of any business, and one, which, if done effectively, will draw in new clients and impress your existing ones! In addition to this is making sure that you have a reliable, professional and expert sup-
plier as this makes a massive difference. Working with prod-
ucts that you have faith in and know to be highly effective and efficient is vital, it gives peace of mind to both practitioner and client. I’ve been delighted at the success of ‘Whitening Wednes-
day’s’ at Ollie & Darsh. It’s clear to me that by combining strong marketing and excellent prod-
cut suppliers, you are guaran-
teed success’”

For more details call Discus Dental on 01923 850423.

Dr Daz Singh BDS is
Clinical Director at Ol-
lie & Darsh.

He is a great sports
enthusiast and enjoys
playing football and
cricket. He is also an
avid West Bromwich Albion Fan. Dr Singh graduated from the University of Liverpool and have settled and worked in the city ever since.

He has passionately sought further learning and under the guidance of in-
ternationally renowned dentists in the UK and the USA, has honed his clinical ability to provide the best level of care for patients at Ollie & Darsh.
There is an old saying that ‘nothing is ever invented and perfected at the same time.’ Take a moment to consider the advancements seen in the dental industry and it’s clear that many innovative techniques and materials have required a great deal of refinement in order to become successful treatments patients now benefit from today.

Consider restorations. In the past the profession has seen great leaps forward in the materials and methods used to create and fit restorative implants. One of the central concerns of any restorative work is the balance between strength and aesthetics of the implant. The progress made using titanium helped address some of the strength issues, but clinicians have long known the aesthetic limitations of metal. As a result, maintaining the aesthetic integrity has always been a challenge.

In today’s image-conscious society, providing restorations that are aesthetically pleasing is often now a priority for more patients. Clinicians who address this demand are the ones who will ultimately benefit from a developed patient base; that is why it is time to reconsider all-ceramic implants.

At the time of its introduction, when dental professionals did their research, they found that while the all-ceramic could meet the aesthetic needs, it was compromised by a lack of strength and durability. Like so many new innovations, it failed to live up to the expectations.

But that was then. Now there have been great advances in both the materials themselves as well as the technologies at the disposal of dental laboratories to create outstanding restorative work that surpasses all expectations in terms of both strength and aesthetics. All-ceramic has had time to mature into an effective restorative solution, and this is supported by an abundance of research and clinical evidence.

Cubic zirconia possesses several advantages over traditional crown and bridgework materials of metal and porcelain, but chiefly it possesses the strength required to maintain a durable restoration whilst retaining the advantage of being lighter and more natural looking. One criticism leveled at zirconia in the past is that it is not biocompatible, but how compatible is metal? Many clinicians are seeing less of an allergic reaction between the all-ceramic restoration and the gum line, maintaining the aesthetically pleasing nature of the work, to the overall satisfaction of the patient.

As well as materials, the technology has undergone rapid transformations over the recent years. At the scanning stage, the model created from the impression taken is scanned by a machine capable of providing a phenomenal 100,000 points of data per laser-triangulated scan. This means an accuracy of 20 microns is achieved and helping to create a finished product engineered to the highest degree of quality.

Those dentists already using all-ceramic restorations are seeing the benefits of being able to market the work as a more cost-effective solution, and the opportunity it presents to grow patient base and treatment acceptance.
The aesthetics of dental restorations have always been important and over the last few years there has been a big increase in both the demand for, and the supply of cosmetic dentistry. There are ultimately three factors responsible for this – the media, patients and dentists themselves.

However, the fact of the matter is that some modern cosmetic treatments may give little or no thought to the future of the patient or what will happen to them down the line. With treatments such as veneers and implants on the rise, dentists should be asking themselves, ‘what is best for the patient?’ not ‘what does the patient want right now?’

Denplan’s Chief Dental Officer, Roger Matthews, interviews Professor Richard Ibbetson to discuss the ethical implications of ‘selling’ cosmetic dentistry and how much dentists should allow themselves to be influenced by the desires of their patients.

In your opinion, what is the dentist’s ethical obligation to their patient when it comes to cosmetic treatments?

“Dental care is about keeping people pain-free and healthy, while trying to satisfy their cosmetic concerns. However, with magazines full of adverts for cosmetic dentistry and more people aspiring to celebrity ideals, aggressive dental treatments for aesthetic reasons alone are on the rise to a worrying degree.

“In my view, any dental treatment undertaken should always be:
• Safe
• Conservative
• Predictable
• Patient directed
• Dentist monitored

“Many patients will come into a surgery convinced of the treatment they want. It is the dentist’s job to ensure the decision is not rushed, that less invasive routes are explored and that the risks are discussed in full. We are taught as business owners that the customer is always right, but when measuring the aesthetic outcomes of various treatments, what the customer perceives can be subjective. In fact, many patients will be open to trying less aggressive procedures first, when they are fully appraised of the potential downside of their initial preference.”

It has been a rising trend for many years now that amalgam fillings are being replaced with the more aesthetically pleasing composite fillings. Is this a problem?

“In many cases dentists use composite as a matter of course, without ever giving patients the choice. There are some situations where composite is the best material for restoring a posterior tooth as it can be more conservative of tooth tissue. However, dentists know that direct composite fillings, particularly large ones, are more difficult to perform and have a significantly shorter life-span.

“As oral healthcare professionals, obliged by codes of practice, we should therefore always talk through potential risks with patients in order for them to make an informed decision. In the same way that dentists will often choose amalgam fillings for their own treatment, in practice I have found that patients are far more open to amalgam, when they understand that composite fillings are not without their disadvantages.”

What impact has celebrity culture had on the profession?

“Celebrities such as Britney Spears and Simon Cowell have a lot to answer for when it comes to dental treatment! Their ‘too-perfect’ teeth have all too often brought peo-
people into the dental surgery with unrealistic goals, which subsequently can pose a moral issue for the treating dentist.

“The risks involved in porcelain veneers are significant, but this fact is often lost on people who are continually bombarded with images of ‘perfect’ teeth in the media. Although fracture or loss of cementation of a veneer is rare, deterioration in appearance particularly due to marginal discoloration is more common and constitutes a failure. Therefore, it is our responsibility to inform patients of the risks and benefits of veneers before they willingly agree to the removal of healthy tooth structure.

“Interestingly, an increasing number of people opt for veneers simply to make their teeth whiter. For a dentist to agree to this method of treatment solely for this reason is unethical, as more often than not, the results look unnatural, over the top and simply odd. In many cases, bleaching teeth can achieve much of the desired result without the loss of healthy tooth structure. It is one of the least harmful procedures and many patients who were considering aggressive treatments such as veneers are often completely happy with the results of whitening alone.”

“This illustrates why dentists should always explore a range of options with the patient (including no treatment), before agreeing to a more complex approach. Investigating other avenues allows the patient to make an informed decision and the dentist to convey the benefits and risks of each procedure, while protecting professional ethics. Remember, just because a patient says they want something, does not mean that a dentist must do it.”

Another trend to appear in recent years is that of ‘instant orthodontics’. How do you think this will affect younger patients?

“More and more patients, young adults in particular, are coming to dentists for treatments such as implants and veneers to avoid the traditional ‘train-track’ orthodontic route. This, however, is simply bad dentistry. To destroy good teeth for a quick aesthetic result is not only unethical but will subject the young patient to a lifetime of repeat treatments and recurring problems.”

“As a profession we should be ensuring that teeth last out people, not the other way round. The first principle is to preserve the patient’s tooth structure wherever possible. The life of the tooth is far more important than the life of the crown or veneer. Treatments such as all ceramic crowns and aggressive preparations for veneers may mean the extensive removal of tooth tissue. In the event of a restoration failure or future problems, there can be little tooth structure left to work with.

“As healthcare professionals we should be continually working under a system of compliance, education and communication. All dental treatments are temporary: deterioration and failure are inevitable. Dentists should reflect on modern trends and decide whether the demands of their patients outweigh their moral obligations. As such, it should be a matter of professional pride to decline treatments if they are felt to be unnecessary or unethical. If we fail to do this it is only a matter of time before we are truly a lost profession.”

Final thoughts

I didn’t know it at the time, but back in the Seventies I became an enthusiast for minimally invasive dentistry. Back then, the idea of keeping as much tooth structure intact seemed much more appealing than gambling on the success of full dentures and this is still true when looking at the costs of implants today.

It is clear that both Richard and I are keen supporters of prevention where possible and high-quality preservation when appropriate. To act otherwise is a breach of our professional ethics: and this should apply whether the impetus for treatment originates with the dentist’s diagnosis or the patient’s aspirations. Both are legitimate, and both need the same care in evaluating.

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ABB (Alignment, Bleaching, Bonding)

The Treatment Sequence that should change Cosmetic Dentistry says Tif Qureshi

This article will outline how the combined and simultaneous use of the Inman Aligner, tooth whitening followed by edge bonding can redefine the approach taken to smile design. It also highlights how it will help dentists respect a patient’s decision as their treatment progresses rather than short-circuiting to an end result using ceramics setup with classic smile design principles.

Discussion.

“Changing cosmetic dentistry” might seem like a pretty big goal, but it’s become very clear from lecturing and writing about this particular discipline that it creates a huge amount of excitement and positive reaction. Dentists see the logic in it very quickly and can also see how, with some education, they can employ a safe, low-risk technique that they know their patients will want and will massively change their approach to cosmetic and aesthetic dentistry. They also understand that there is a massive market of patients who will accept this kind of non-invasive treatment happily.

Treatment with the Inman Aligner has been further developed in the UK where techniques are used to make it dramatically effective as a solution for certain mild and moderate anterior orthodontic issues. Cases, which traditionally would take six-10 months with clear aligner systems can, with education, be treated in six-16 weeks.

We have all seen how bleaching can affect a smile. We know how much bonding can improve aesthetics and tooth anatomy. Now that alignment is potentially so simple, these three disciplines have been brought together to create results that easily challenge traditional veneer based smile makeovers. And, if the three treatments are combined with some thought, it is possible to massively improve a patient’s smile in around three months.

All of a sudden the six-10 unit veneer case used for a smile makeover can look ridiculous and be seriously in danger of becoming over treatment. There are always situations where ceramics are highly appropriate, such as in wear cases or in major reconstructions, but for anyone with good quality intact enamel, I believe this kind of treatment represents a far more ethical, patient centric approach.

This is because I believe the way smile design is approached, and perhaps even taught, is wrong. The final outcome, for what is aesthetic is important. Golden proportion ideals, tooth width length ratio, gingival zeniths etc all together create something we know to me almost mathematically correct. The problem is that most dentists experience their smile design education attached to a lecture or course based on veneer dentistry. As a result dentists will naturally think this to be the only and perhaps fastest way to achieve a “perfect smile”.

If we assess a patient’s smile and try to preview an end result at the first consult, using imaging software, a wax up or even a preview try in, we are not really letting the patient see their teeth improve at different stages to see if their expectations are being met along the way.

The smile design rules are there, but how many patients if they see their teeth improving with alignment then bleaching and then bonding, would actually then take another step with porcelain and some tooth destruction to achieve total perfection? In my experience, very few.

Some still do go further, but at least by then their teeth are straight and we can use truly minimal and almost no prep veneers to improve the aesthetics further.

Most of the time, once we are ⅔ through alignment and start to bleach it becomes very clear that simple bonding is all that will be needed to create a very aesthetic smile that previously would only have been achieved with aggressive veneer preps.

The case outlined below is a typical case of a patient who once wanted and considered having porcelain veneers. Instead she opted to align her teeth then bleach and bond.

Case and Diagnosis

This 32-year-old patient complained about the “crooked look” of her smile. The patient was aware of what a smile makeover could achieve, but wanted to achieve something without damaging her teeth.

On examination several problems existed. Firstly her teeth were moderately misaligned. This creates aesthetic issues immediately. Large unsightly embrasures were made worse around the canines. The standing laterals appeared darker and in the shadow of the lips, the left one being in slight cross-bite. With the centrals spayed out and rotated the line angles of the four incisors were all different.

It was clear at the start by examining the incisal edges that there had been differential degrees of wear meaning that even if the teeth were aligned, the incisal outline would
still look uneven - this meant we needed to have a conversation about some potential edge build ups after.

All options were discussed. The patient ruled out fixed braces, even with more recent faster techniques because she wanted something removable and we had also discussed the possibility of simultaneous bleaching during the alignment phase.

We assessed for an Inman Aligner. At the consultation the occlusion was examined and it was clear that the laterals had room to advance labially and the centrals could also be derotated.

We then needed to assess the actual amount of space needed. Inman Aligner cases should be planned carefully to ensure the case is suitable and also to understand how much space needs to be created. This can be done with models using Hanchers technique 9. The SpaceWize tm crowding calculator was used to assess the patient in the chair.

An occlusal photo was taken with a mirror and the upper central tooth was measured with digital calipers to help calibrate the software.

The occlusal photo is uploaded and the calibration tooth details entered. The mesial distal widths are simply drawn on for the all the teeth to be moved which Inman Aligner treatment is always the front 6 teeth. The software calculated the total of the mesial distal widths and this is described as the Required space. An ideal curve is then plotted with the software with the proposed final position. This is made with occlusion, aesthetics and function taken into consideration. The curve can be manipulated easily with the software and this gives us the Available space. The difference between these two measurements is calculated automatically and this is the amount of space that needs to be created to achieve the final result.

As can be seen in the SpaceWize tracing, 3.1mm of crowding was present. This may seem less than expected when considering the degree of crowding when looking at the occlusal photo, but because the laterals are advancing forward, this will actually create space.

As decided that an Inman Aligner with incorporated expander would be used to treat the case. Incorporated expanders are a useful tool to create space supplementary to IPR or as an alternative. They must not be expanded beyond 2.5mm and only supply a temporary degree of space to allow the anteriors to align. The small degree of posterior expansion will always re-lapse and the midline can even be unwound after the anteriorrs have aligned. Each turn produces 0.25mm of space.

**Treatment sequence**

The Inman Aligner was fitted at the next appointment. Instructions were given and only a small degree of IPR was performed over the front teeth (0.1 mm per contact).

No IPR was performed initially around the centrals because with the degree of crowding it would be easy to miss the contact point. Instead the teeth are stripped strategically and progressively meaning we release a little room to allow the teeth to align then we re-perform IPR over several visits again only performing a little at a time.

Critically Inman Aligner treatment uses progressive anatomically respectful IPR. Despite calculating the amount of crowding present, the IPR is never carried out in one go. IPRs strips or discs are only used. This gives the opportunity to ensure the stripping is far more anatomically respectful than using burs or heavy discs.

This massively reduces the risks of excess space formation, gouging or poor contact anatomy. The contacts are smoothed and the fluoride gel is applied each time.11,12 Composites anchors were also placed on the palatal incisal edge of the instanding lateral teeth to ensure the palatal bow engaged correctly.

The patient was also shown how to turn the midline screw. She was instructed to do this once a week and did this for seven weeks, but was seen every 2-5 weeks to check progress and re-perform a little IPR if necessary.

The patient was instructed to wear the Inman Aligner for 16...
18 hours a day. Studies \cite{4,8,11} show that this is far less likely to cause root-resorption and the Inman Aligner is highly effective even with the Aligner out eight hours a day. This allows better hygiene and patients can also function with day-to-day activities more normally.

After nine weeks the laterals were already getting close to the proposed position and the centrals were de-rotating nicely.

At this point with Inman Aligner treatment we often start to bleed. Impressions are taken even though the result is 25 per cent from finished. Sealed, rubber trays are made and careful instructions are given.

While the patient is highly concentrated on using the Inman Aligner, they are always highly receptive to using bleaching trays. It adds greatly to motivation and often means they achieve a far better result. Discuss Dental Day White is used so that the patient only needs to wear the bleaching trays for 55-45 minutes a day. The patient was happy with the degree of whitening achieved.

It was becoming highly apparent to the patient at this stage that she would only need some final edge bonding to achieve a very aesthetic result.

The patient whitened for two weeks. At week 11, alignment with the Inman aligner was almost complete. A single clear aligner was used to correct some minor spacing and also to help bring the right canine into line. After using the Inman Aligner, canines are far more receptive to movement with clear aligners.

At week 15 the incisal edges from canine to canine were only slightly roughened. No local anaesthetic is required with this simple additive bonding.

Venus from Hereaus Kulzer was used in dentine and enamel shades in B1 was used to build the missing incisal outline. The teeth were then polished with discs, pogo sticks and flexibuff discs. The patient initially was not keen to have centrals that were longer than the laterals so a fairly flat smile line was created. One week later she returned and asked for another 1.5mm of central incisal length. This was again provided by adding more Venus. At the same visit a wire retainer was bonded in place from canine to canine. (12,15)

Results
This patient achieved a result in just 13 weeks that she had only previously thought possible using ceramic veneers in this approximate time. "This patient achieved a result in just 13 weeks that she had only previously thought possible using ceramic veneers in this approximate time."

Her teeth are far better placed for future ceramic restorations if necessary. She commented that she was worried that with veneers, she would have lost the natural character of her teeth, but by using ABR, this was retained and we just made her own teeth more beautiful.

Discussion
Any dentist offering cosmetic and restorative dentistry should be aware of all developing techniques. Many patients in the UK are choosing this approach and are demanding it in their practices. This approach is becoming common with dentists who offer orthodontic solutions, but not offering it and only offering ceramic solutions could result in potential consent issues.

The simple fact is that once a dentist is educated in the advanced use of an Inman Aligner, this kind of treatment is far simpler and less risky than treatments where large amounts of tooth structure are removed and where there is a heavy reliance on porcelain for the final result. Being able to align and bleach simultaneously adds huge value and increases motivation tremendously.

Long-term predictability is far better and the patient doesn’t enter a restorative cycle that can easily worsen the long-term prognosis.

Patients are also far happier because the treatment is more affordable, and they understand the benefits of reducing long-term risk by aligning, bleaching and bonding. Compared to the traditional methods of providing ideal smile design, ABB represents a radical and arguably revolutionary change in the way cases like this are approached.

A far more truly conservative result that actually respects the opinion of the patient at different stages means that heavy arch form preparations, with aggressive tooth removal just to line teeth up to allow space for veneers, could soon become a thing of the past.

Disclosure
Dr. Qureshi runs hands on courses with Dr. James Russell and Dr. Tim Bradstock-Smith and lectures on the Inman Aligner worldwide.

Acknowledgements
The author thanks Donal Inman C.D.T. Inman Orthodontic Laboratories, Florida, Nimrodental Ortho Lab Paddington London (The only STS Certified Inman Aligner Laboratories.)

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