

## Dental Facial Aesthetics



### Botox 101

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**B**otox® Cosmetic has recently hit the news in Dentistry. The public (particularly female members of the public) has been aware of its impact for much longer. It has had a very significant influence on facial esthetic treatment and is now the fastest growing cosmetic procedure performed world-wide due to its natural-looking results. As dentists are becoming more aware of its possibilities and are trained in its delivery, controversy has arisen amongst some members as to whether it has a place within the profession. Why should dentists be involved with something that has traditionally been in the hands of our medical colleagues? Is not our role to look after the health of our patients' teeth and gums? What business do we have entering the arena of facial wrinkles? Are we not cheapening the profession by so doing, opening ourselves up to the accusation of just wanting to line our own pockets? What possible connection could Botox® have with Dentistry? Is it not a dangerous drug that can cause all kinds of side effects?

Many dentists are not aware of what Botox® Cosmetic is, how it works, or how it differs from other types of facial esthetic treatments such as dermal fillers. So, here is a condensed course in "Botox 101" and why dentists should at least be informed about what it is, how it works, and how it influences our major sphere of influence, the mouth.

Botox®, produced by Allergan Inc, comprises a natural, purified protein that relaxes wrinkle-causing muscles,

creating a smoothed and improved appearance. It is administered via a few very small injections into the muscle and blocks the nerve impulses that cause wrinkle-causing contractions. It is a simple and quick, minimally-invasive procedure that delivers dramatic results with no downtime. It is recommended for upper facial wrinkles, to relax frown lines between the eyebrows and has been studied in relaxing horizontal forehead lines and crows feet around the eyes. It differs from (and is often used in conjunction with) another popular choice, injectable gels such as Juvederm™ or Restylane®. These gels made from hyaluronic acid, a natural sugar found in the skin, are used to treat deeper lines or folds and increase volume in various areas of the face.

Botox® is made from purified exotoxin of the *Clostridium Botulinum* bacteria. The protein molecule acts on the neuro-muscular junction to prevent the release of the neuro-transmitter acetylcholine, inhibiting the muscle fibre from contracting. It has been used for a variety of conditions for over 20 years. For wrinkles, Botox® Cosmetic has been used for fifteen plus years. The amounts that are used for treating facial wrinkles are very small and any side effects are local. The side effects include slight bruising, short-term headache, slight tenderness at the injection site and ptosis.

The action of Botox® intersects with Dentistry in several areas. The first and most obvious area is that of esthetic dentistry. Using Botox® to treat what one might


think are "remote" areas of the face relative to the mouth can and does have an effect on the amount of tooth display and the shape of the mouth. If a dentist is planning a smile makeover, he or she should have a good understanding of the effects that Botox® may have on his treatment planning. Whether we know it or not, many of our patients (both men and women) already ARE having Botox® treatment or plan to do so. Should we not understand how this treatment may affect the amount of tooth they will show after we are finished or how the soft tissue around the mouth may drape differently if Botox® is administered at a later date?. Would it not be better if the treating dentist had some control over these effects?

A second intersection between Botox® and Dentistry is in the area of periodontics. Periodontal disease is widespread and its etiology is multifactorial. Bacterial and occlusal components are implicated along with a variety of "other" factors. Recent studies have found strong links between stress, depression and periodontal disease. Other studies have found that our emotions may be driven to a large degree by our corresponding facial expressions and that decreasing our ability to frown results in a more positive mood. With Botox's ability to decrease the ability to scowl and frown, it has been found to result in

improved mood. It is not much of a stretch to postulate that Botox® may be useful in decreasing stress and depression and hence some periodontal disease! Should dentists not be part of this investigation?

Not many years ago it was considered frivolous by some in our profession to treat patients' dental esthetic issues. No matter that improving the alignment, colour and shape of teeth results in an improved self-image with all the attendant benefits. Thankfully, many dentists now listen to their patients' concerns and do not dismiss them out of hand. Botox® treatment should be part of the dental armamentarium. Appropriate training is essential, just as it is for any of the procedures we perform. Who better to provide Botox® facial treatment than a properly trained dentist who is skilled in giving injections, who has had extensive training in head and neck anatomy and who routinely performs a wide variety of complex procedures. We are no longer "tooth carpenters" and should not think of ourselves as such! Our patients deserve the best we can provide them and incorporating another tool that improves their treatment is our duty. **W**

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