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RESEARCH ARTICLE

BOTOX- CHANGING FACE OF DENTISTRY-A REVIEW.

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Abstract

The esthetics of the smile involves more than just the teeth. In this era of passion to look beautiful various new technologies are emerging to enhance and improve the physical appearance of people. With the introduction of botox into dentistry had made remarkable changes for both the esthetics as well as therapeutic is concerned. The botox is a minimal invasive technique and may prove out to be an attractive alternative to surgery.

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Introduction:-

1. We can't deny the fact that we all thrive to look young so called less than our age^[1]. A growing number of dentist are now providing botulinum toxin otherwise known as BoNT-A, treatment for their patients for both oral and maxillofacial cosmetic and therapeutic use^[2].
2. In 1897, Emile van ermengem found the producer of the botulin toxin was a bacterium which he named clostridium botulinum^[3]. Currently, seven botulinum toxin serotypes (A, B, C, D, E, F, and G) produced by Clostridium botulinum, are recognized^[4].
3. Three forms of botulinum toxin type A (Botox, Dysport and Xeomin) and one form of botulinum type B (MyoBloc) are available commercially for various cosmetic and medical procedures^[5].
4. The therapeutic use of botox was first proposed by Justinus kerner^[6]. In 2013 Dental Quality Assurance Commission approved the use of botox for general dentist^[7].
5. Minimal invasive treatment technique plays an important role now a days and botox is one such minimal invasive option for a number of dental conditions it is commonly used to treat Temporomandibular disorder, Dental Implant and Surgery, Gummy smile, Masseteric hypertrophy, Mandibular spasm, Trigeminal neuralgia, Bruxism, Orthodontic relapse^[8].

Mechanism Of Action

The main action of botox is to inactivate the hyperactivity of muscle. By injecting overactive muscles with a desired amount of botox results in decreased muscle activity by blocking the release of Acetylcholine to the presynaptic membrane^[9]. This effectively weakens the muscle for a period of three to four months^[10].

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Preparation Of Botox

BOTOX is kept frozen (2-4 °c) in a sterilized area until it is ready to use. The drug is put into solution, following manufactures guidelines, by adding normal saline. Once prepared it should be used within 4 hours the needle selected for injection usually is between 26 and 30 gauge. Skin preparation involves alcohol wipes and dry sterile gauze sponges. Aspiration before injection is recommended .The proper targeting muscles is a crucial factor in achieving efficacy and reducing adverse effects from Botox injections. The therapeutic effects of botox first appear in 1 to 3 days, peak in 1 to 4 weeks and decline after 3 to 4 months [11].

Yonsei Point

Yonsei point is the injection site for treating gummy smile which was proposed by Hwang et al at Yonsei University College of dentistry, Seoul, Korea [12]

It is a point located at the centre of triangle formed by three muscles mainly Levator labii superioris, Levator labii superioris alaeque nasi and Zygomat�icus minor a dose of 3 units is recommended at each injection site.

Clinical Applications Of Botox In Dentistry[13]

TMJ DISORDER	Mild to moderate cases-bilateral injections of 7.5U into the anterior vertical fibres of each temporalis muscle. Severe cases-2.5U is given into the middle and posterior third of the temporalis muscles.
Masseteric hypertrophy	5U injected into the belly of the masseter below an imaginary line joining the tragus of the ear and the corner of the mouth.
Trigeminal neuralgia	25-75U injected into peri-cranial muscles.
Mandibular spasm	35U for each lateral pterygoid muscle and 30U for the sub mentalis complex.
Gummy smile	0.25U per muscle bilaterally into the levator labii superioris, levator labii superioris alaeque nasi, and zygomaticus minor.
Bruxism	Severe Bruxism with 100U to the temporalis and masseter muscle[14]

Contraindication

Botox therapy is contraindicated in certain conditions such as:

Pregnancy, Lactation, neuromuscular disease (myasthenia gravis), motor neuron diseases[15]. The potential adverse effects of botox in oromandibular disorders include facial nerve palsy, pain at the injection site, dysphagia and hematoma[16].

Conclusion:-

Botox therapy is one of the most promising and exciting novel additions to the dentist for the treatment of various orofacial and cosmetic corrections. Botox provides a treatment that is reversible, conservative, quick and painless in comparison to other surgical alternatives[17].

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