

INNOVATION OF BOTOX COSMETIC



Dr. F Didar
CEO
Cosmetic Facial UK(CFUK) Limited
www.cosmeticfacial.co.uk, info@cosmeticfacial.co.uk

History of Botox (time line)

1. 1895: professor Emile Pierre Van Ermengem discovered (identified) bacterium bacillus botulinum. It was renamed later as clostridium botulinum).
2. 1920: Herman Sommer isolated botulinum toxin type A. (purified form as a stable acid)
3. 1946: Edward J Schantz purified the toxin in crystalline form. This provide more opportunities to study the molecule.
4. 1950: breakthrough point: Vernon Brooks discovered injecting the toxin blocks the release of Aetyecholine from the end plate of nerve. No signal no muscle activity or reduction of muscle activity.
5. 1960-1970: discovery of effectiveness of botulinum toxin in strabismus by Scott Smith Kettlewell. He formed later Oculinum (late 1970) to continue his research in human volunteers.

History of Botox (time line)

6. 1988: allergan acquired the right to distribute oculunium.
7. 1989: FDA approval for oculunium for treatment of strabismus and blepharospasm . Allergan changed the name later to BOTOX:
8. 2000: FDA approved BOTOX for the treatment of Cervical Dystonia
9. 2002: breakthrough in cosmetic industry: FDA approved the same formulation for the improvement of the moderate to severe frown line. The product was named Botox Cosmetic (onabotulinumtoxinA)
10. 2004: FDA approved BOTOX for the treatment of severe hyperhidrosis.
11. 2010: BOTOX received the licence to treat increase muscle stiffness in the elbow, wrist and finger (upper limb spasticity).

BOTOX significant contribution to NSFA

- Botulinum toxin, as monotherapy or in combination with other modalities, has revolutionized cosmetic procedures.
- Botulinum toxin is the only treatment that improves dynamic facial lines by targeting the underlying muscles.
- •It is the only treatment which improves the dynamic facial line by relaxing the underlying muscle.
- Facial line have multiple a etiology like photo aging, genetic, smoking and gravity as well as muscular action. Aesthetic surgery, topical agent, fillers, laser and now botulinum toxinA.
- Botulinum toxin A optimize and maintain the upper and mid-face face lift(surgical and non-surgical), current and future evolution .

BOTOX significant contribution to NSFA

- It is called medico- surgical combination. This is the aesthetic evolution of the new millennium . BOTOX mono therapy or combine with other procedures has revolutionized the Aesthetic industry.
- Use of BOTOX in cosmetic industry and procedures doubled between 1999 and 2000 whereas the other procedures changed a little.
- Botox treatment is a minimally aesthetic procedure with no down time. Patients can go back to work and normal life.
- It's effect is reversible. The toxin has a high margin of safety.
- The effect of further injections last longer.
- Treatment of choice for glabellar line.
- It can be used in combination therapy with other procedures like microdermabrasion . (Michael Kane in IMACS 2000)

BOTOX significant contribution to NSFA

- It is effective in nasolabial fold, dimpled chin, depressor ANGULI ORIS and peri oral rhytides. Carruthers concluded BOTOX for aesthetic improvement in the mid and lower face and neck.
- The use of Botox in particular area like peri oral region in combination with other therapeutic modalities optimizes the results.
- BOTOX is useful in management of complication of aesthetic surgical
- Park et al. Described a large experience in the treatment of hypertrophy of masseters muscle in lower facial contouring.
- K gadhia et al. Reviewed 11 RCT in aesthetic use of Botox. They found efficacy of BOTOX over placebo in treating facial wrinkles. There was a 0-5.4% belpharoptosis in total 11 RCT since 1977 to 2009.

BOTOX significant contribution to NSFA

- ◉ International consensus recommendation on cosmetic usage of botulinum toxin type A (Speywood Unit) in mid and lower face are as following:
 1. Lower eye lid wrinkle
 2. Bunny lines
 3. Drooping nasal dips
 4. Perioral wrinkles
 5. Masseter hypertrophy
 6. Drooping mouth corners
 7. Dimpled chin ◉ Platysmal bands
 8. Décolleté wrinkles

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- Hyperkinetic(dynamic) Facial Lines FDA approval for glabellar lines
- Eyebrow Lifting
- Frontalis muscle hyperactivity
- Dimpling of the chin from overactive muscles
- Raise drooping of the corners of the mouth

BOTOX THERAPEUTIC

FDA approved

- Migraine Headaches
- Dystonia(Benign Essential Blepharospasm,Oromandibular Dystonia, Cervical dystonias, Pharyngolaryngeal dystonias, Writer's cramp, Non-action induced limb dystonias,)
- Hemifacial Spasms
- Strabismus or crossed eyes
- Exocrine gland hyperactivity

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- Fine lines around the lips.
- Fine wrinkles under the eye.
- Masseter hypertrophy
- Bunny lines and drooping nasal tip
- Platysmal bands
- De'collete' wrinkles

BOTOX THERAPEUTIC

Non-FDA approved conditions:

- Prostate Hyperplasia
- Smooth Muscle Disorder
- Overactive Bladder Syndrome with or without incontinence.
- D) Spastic Disorders associated with injury or disease of the central nervous system
- E) Anal Fissure, Diabetic neuropathy
- G) Wound healing, Excessive salivation
- I) Parkinson Disease, Depression

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