



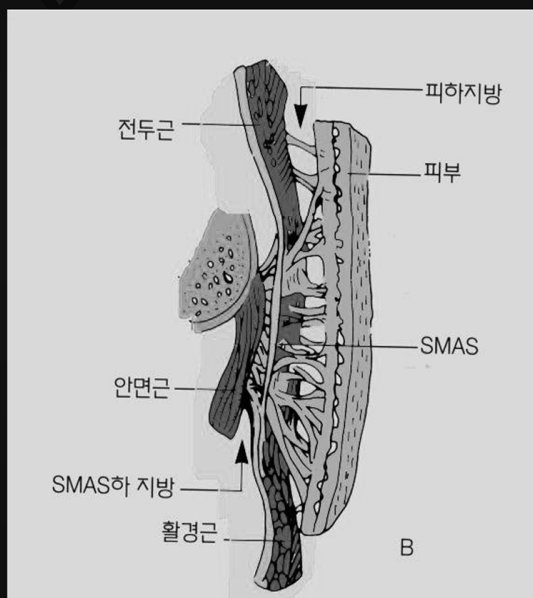
안 기 영

안기영 성형외과

주름 치료



주름살의 원인



- 피부의 노화 현상 및 햇
 별에 의한 손상;자외선
- 안면표정근의 과다
 한 수축으로 인한 이차 현
 상
- 유지인대의 약화로 인한 처
 짐 현상

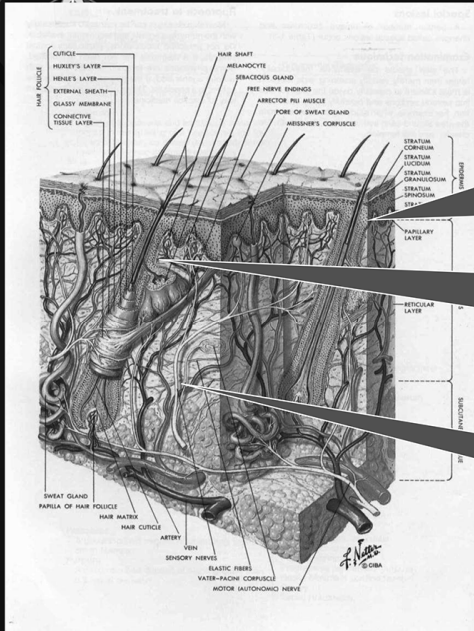


The Development of Lines & Wrinkles on the Face

- **Aging** (intrinsic & photoaging)
- **Gravity** (vertical & sleep lines)
- **Muscular action** (lines of facial expression)



피부의 노화 현상 및 햇볕에 의한 손상



표피각질층의 배열의 치밀성과 질서가 없어짐
표피와 진피층사이의 융기가 점점 평평해짐

멜라닌 색소 자극
불규칙한 색소 침착;
기미 주근깨 검버섯

탄력섬유가 끊어지고 양이 줄면서 피부 전체의 탄력이 떨어짐
콜라겐 섬유의 감소

■ 피부와 피하조직이 끊임없이 위축되어가는 과정



안면 표정근이 주름살에 미치는 영향

표정 짓는 동물은
나이가 들면서 주름이 생긴다.





FACIAL WRINKLE LINES IN ORIENTALS

MUSCULAR ACTION > AGING & GRAVITY



안면주름살의 종류

- 원인별
운동 주름선, 굴신 주름선, 중력 주름선 등
- 표정근 운동
Dynamic or Static
- 주름 양상
Fine or Deep wrinkle lines



History of Trial for Aesthetic Use

■ Carruthers JD & Carruthers JA (1992)

Treatment of glabellar frown lines with C. botulinum-A exotoxin

■ Blitzler A ,Brin MF ,Keen MS ,Aviv JE (1993)

Botulinum toxin for the treatment of hyperfunctional lines of the face

Botulinum toxin A for hyperkinetic facial lines: results of a double-blind, placebo-controlled study.

Botulinum toxin A : novel method to remove periorbital wrinkles

■ Garcia A,Fulton JE (1996)

Cosmetic denervation of the muscles of facial expression with botulinum toxin. A dose -response study

■ Foster JA Barnhorst D (1996)

The use of botulinum A toxin to ameliorate facial kinetic frown lines.



근육 주사 VS 주름살 아래

Carruthers Corrugator 치료시

■ 주름살 아래 주사; 16명 중 6명이 중단

계속치료 환자 중 8명은 근육에 주사시 만족
근육 주사시 15명중 2명만 중단

■ 효과기간; 2개월이하

주름살 아래 16명중 8명
근육 주사시 15명중 3명





METHOD



- BTX-A ; 6 가지

- BTX-B ; Myobloc®



INJECTION TECHNIQUE



BOTOX® : Handling & Administration

- Vacuum- dried product.
- The Toxin should be kept freeze-dried at or below -4 °C.
- Reconstitute under sterile,preservative-free,normal saline.
(0.9% sodium chloride injection recommended)
- Gently inject into vial and do not shake.
- Record date and time of reconstitution.



BOTOX[®] : Handling & Administration

- **Inject with 30gauge needles for maximum patient comfort**
(1 cc tuberculine syringe ; 28 G or 30 G)
- **Use EMLA cream, if necessary**



BOTOX[®] 100 U/vial

0.9 % NaCl 2.5 units/0.1cc

5-10 U/EACH MUSCLES





Facial Anatomy

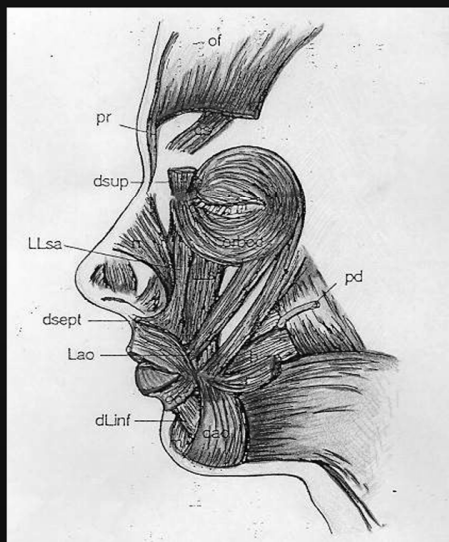
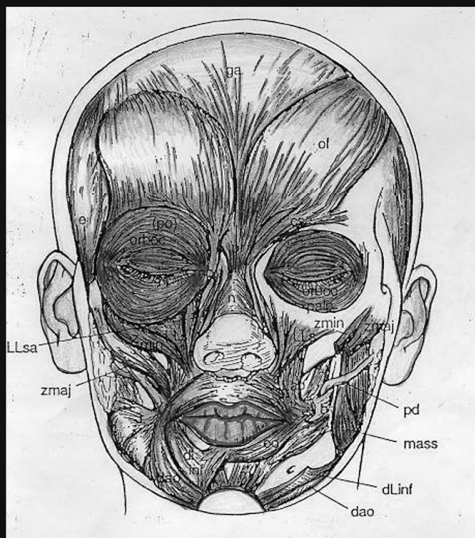
BOTOX® is an intramuscular injection.

Thorough knowledge of the complex facial musculature is essential for success.

Review anatomy



ANATOMY OF THE FACIAL MUSCLE

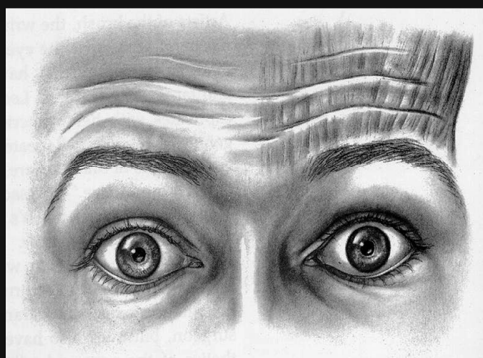
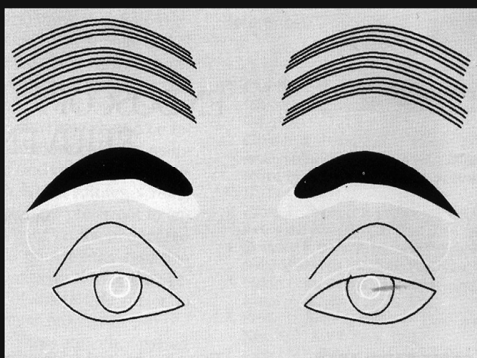


Actions of Facial Muscles


Muscle	Action	Expression Lines
Frontalis	Brow elevator	Horizontal forehead lines
Corrugators	Pull eyebrows medially	Frown lines
Procerus & Depressor supercilii	Brow depressors	Frown lines & Horizontal nasal lines
Orbicularis oculi	Brow depressors- Especially laterally	Crows Feet




Expression Muscle Action



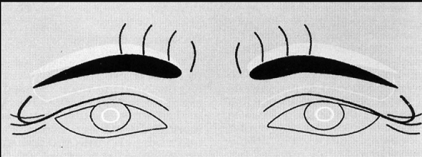
FRONTALIS



Corrugator supercilli

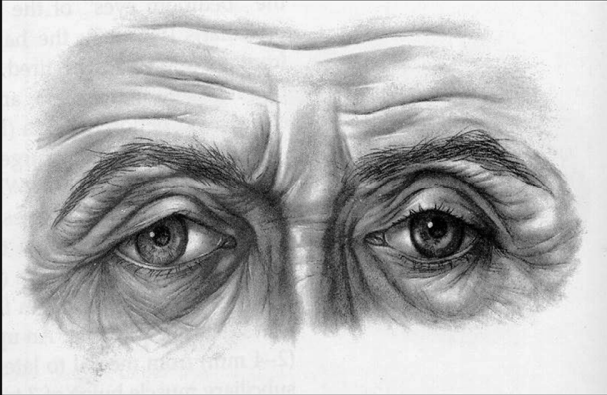



Procerus




Orbicularis oculi

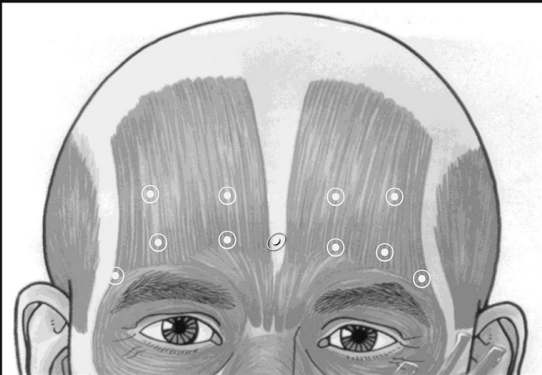
Expression Muscle Action








INJECTION SITES

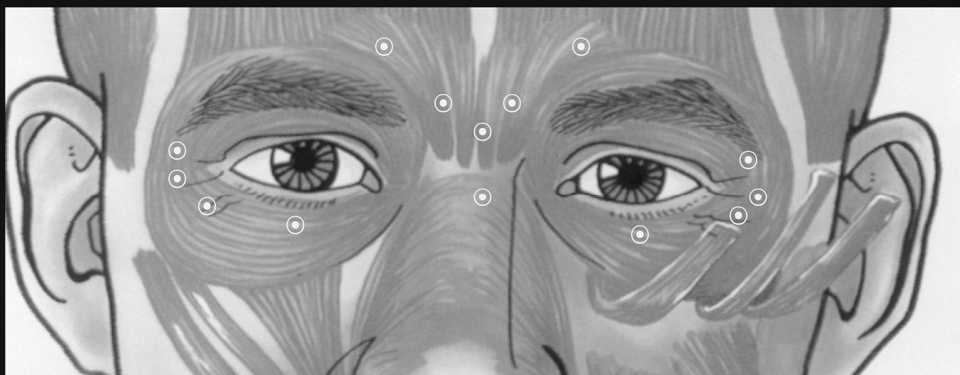


Forehead Wrinkles





INJECTION SITES



Crow's Feet, Glabellar & Nasal Wrinkles



INJECTION SITES



Wrinkles on the Upper Lip





증례



시술법의 장점

- 시술전후 처치가 필요 없다.
- 시술이 간단하고(약10분 정도) 통증이 거의 없다.
- 시술자국이 없어 시술 후 바로 일상 생활이 가능하다.
; 젊은 직장인
- 비교적 경비가 싸다
- 수술, 피부박피술, 다양한 주사법을 함께 시술 시 더욱 효과적이다.



Considerations about long-term exposure

- ☞ Denervation atrophy & necrosis in human(1989, Borodic GE)
No necrosis, inflammation(1991, Harris CP)
- ☞ Reversible chemical denervation from collateral sprouting
 - 1) unmyelinated terminal axons
 - 2) node of Ranvier of myelinated parent preterminal axons
 - 3) ultraterminal axonal arborization over the end plate
- ☞ Resistance(3-7 %)
- ☞ Antibody formation is related(1974, Habermann)
 - short interval between injections
 - higher dose
 - more boosters

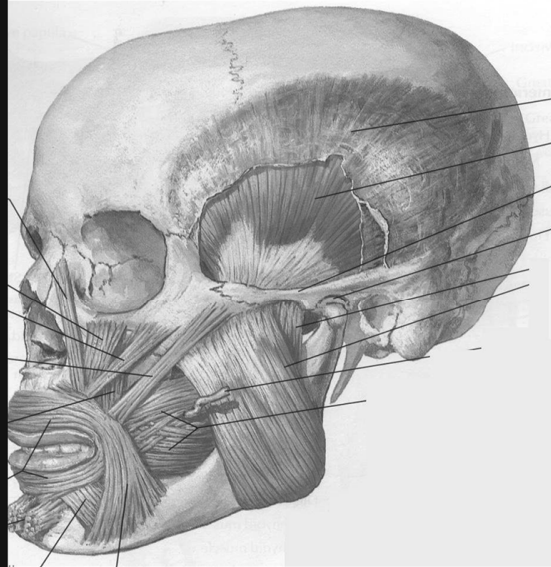
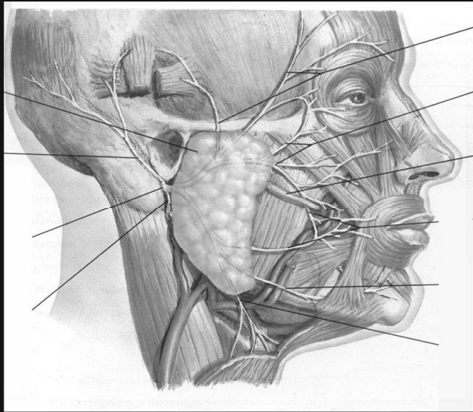


사각턱 교정술

**Ki Young Ahn* MD,
Mee Young Park MD**



해부학적 고찰



Method

- 2 cc of Normal saline /vial
- 25-30 units/side
- Mandible angle 주변에 5-6 곳



주사방법

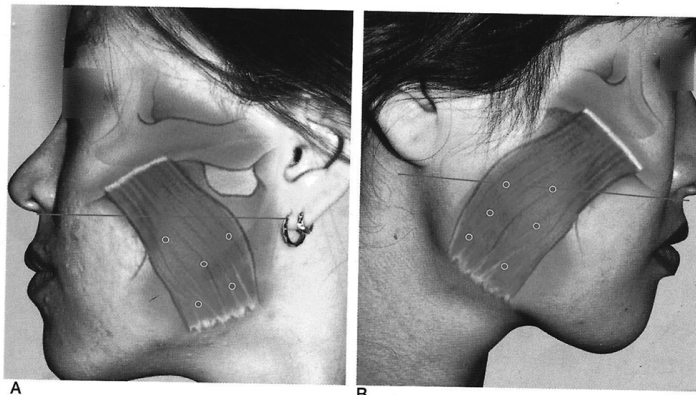


그림 7-5 주사 방법

코와 윗입술이 만나는 지점 이하 부위에 측면에서 사선으로 달리는 교근을 연상하면서 5~6군데에 골고루 주사한다.



증례





부작용

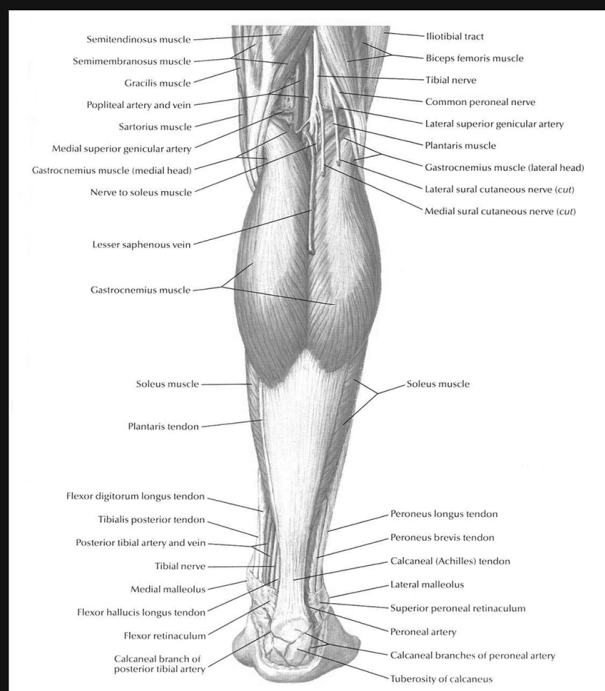
- 딱딱한 것이나 껌 등을 씹을 때
- 힘이 빠지는 느낌; 3일에서 일주일 정도
- 동통
- 피멍



알통다리 교정술 CALF HYPERTROPHY



해부학적 고찰



METHOD

- 10cc of normal saline per 1 vial
- 50-100 U/Side BOTOX[®]
- 5-12 points/each calf





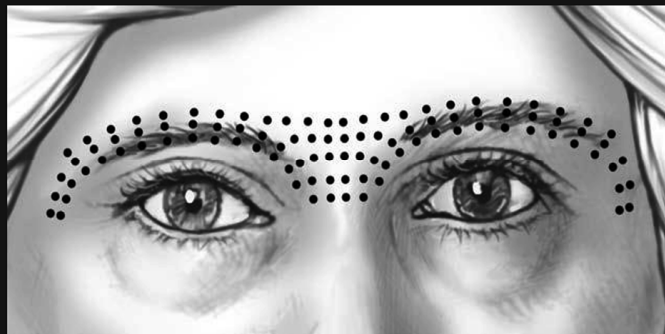
증례



DERMOTOXIN에 대한 견해



Cosmetic Microdroplet Botulinum Toxin A Forehead Lift:



Ophthal Plast Reconstr Surg. 2014 Sep 11.



Antibody-Induced Failure of Botulinum Toxin Type A Therapy in a Patient with Masseteric Hypertrophy

SOO-KEUN LEE, MD, PhD*

BACKGROUND With the expanding use of botulinum toxin, much concern about the antibody against botulinum toxin is arising. Unlike neurologic indications such as cervical dystonia, antibody-induced failure of botulinum toxin therapy has never been reported in the cosmetic field.

OBJECTIVE The objective was to describe a case of an antibody-induced failure of botulinum toxin type A (BTX-A) therapy (BOTOX, Allergan, Inc.) that occurred in a patient with masseteric hypertrophy.

METHODS AND MATERIALS We present a 20-year-old girl who developed antibody-induced therapy failure after the fourth injection series. Sixty units of toxin was injected at each series and the inter-treatment interval was four to five months.

RESULTS Frontalis test revealed no paresis of muscle after a unilateral injection of BTX-A. Circulating antibodies against BTX-A were detected by indirect enzyme-linked immunosorbent assay and mouse protection assay.

CONCLUSION This case is unique in that, first, immunoresistance developed in a patient of cosmetic indication where only a small dose of BTX-A was administered and, second, antibodies developed on the so-called new formulation of BOTOX. Our case alerts cosmetic surgeons to the importance of antibody against the botulinum toxin.

Soo-Keun Lee, MD, PhD, indicated no significant interest with commercial supporters.

Botulinum toxin type A (BTX-A) is a potent modality to treat dynamic wrinkles of the face and neck and also focal hyperhidrosis. Since the

BTX-A treatment of MH is off-label use at the present time.

Dr. Kim's aesthetic clinic



Royal road for BoNT-A injection technique

- Adequate dose according to patient's age & sex
- Accurate Knowledge of facial muscle anatomy
- Drug's characteristics & safety
- Accurate estimation of long term results
after repeated injections
- One kind drug, One method, many experiences

