



Fillers, Toxin and Light Treatment in Skin Rejuvenation

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Fillers – What do fillers fill ?

- Wrinkles and folds
 - around the mouth – nasolabial & puppet lines
 - frown lines & crow's feet
 - Hollows under the eyes
- Acne scars (except ice-pick scars)
- Other scars
enhance lips, chin, cheek & eye hollows, cheek bones, etc.



Fillers

- Non-permanent
- Long lasting
- Permanent
- fat



Non permanent fillers

1. Collagen – e.g. Zyderm, Zyplast
2. Hyaluronic acid e.g. Restylane (non-animal),
Hylaform, Juvaderm & Perlane (non FDA approved)



Long lasting fillers

- Poly-L-Lactic Acid – Sculptra (FDA approved)
- Calcium hydroxyapatite – Radiesse (FDA approved)



Permanent fillers

- Silikon (silicone) – FDA approved
- PMMA/collagen – Artefill (non FDA approved)



Fat fillers

- Autologous fat
- Semi-permanent
- No risk of rejection or allergy



Problems with fillers (1)

- Collagen – short duration; not enough volume
- Hyaluronic acid – pain & bruising
- Radiance – expensive; duration less than expected



Problems with fillers (2)

- Silicone – multiple treatments required
- Sculptra - expensive; reconstitution & multiple treatments required
- Fat – must harvest first; may not last long
- Artefill – non FDA approval; ? granuloma formation



Botulinum toxin

- Neurotoxin for paralysis of muscles
- Type A – Botox (FDA approved) & Dysport (Europe approved)
- Type B – Myobloc (FDA approved for cervical dystonia)



Usage of botulinum toxin

- Cosmetic treatment of wrinkles, expression lines & folds & muscle hypertrophy
- Hyperhidrosis (excessive sweating) of palms, soles & axillae
- Migrane, painful scars, tics, Bell's palsy, cerebral palsy, blepharospasm, cervical dystonia, tennis elbows, etc.



Cosmetic areas where Botulinum Toxin is useful

- Frown lines, crow's feet & forehead
- Around the mouth
- Neck lines
- chest



Botulinum Toxin A

- Botox – FDA approved
- Dysport – FDA approved
- Other home made substances – non FDA approved



Clinical effects & duration of botulinum toxin

- Effect lasts for 3-6 months usually
- Minimal to nil side effects
- Overdosage or incorrect injection may lead to temporary eyelid drooping & facial asymmetry
- ? Long term use may lead to muscle atrophy or tachyphylaxis
- Injection must not be carried out before light or radiofrequency (RF) operation

Light treatment for Skin

Rejuvenation (Photorejuvenation)

- Lasers for pigment & vascular lesions & photorejuvenation
- Intense Pulsed Light (IPL) for pigment & vascular lesions & photorejuvenation
- Ablative skin resurfacing lasers & fractional resurfacing laser
- Photomodulation with LED light sources



Problems seen in ageing skin

- Wrinkles – fine (from collagen & elastic fibre degeneration, thinning of epidermis & dermis, & decreased dermal ground substance & matrix), coarse (expression lines, etc.)
- Pigmentation irregularities – freckles, lentigines, senile keratosis, poikiloderma, moles, etc.
- Vascular lesions – telangiectasias & senile purpura



Wrinkle reduction

- Coarse wrinkles – Botox or fillers injection, skin resurfacing, combining with photorejuvenation programs
- Fine wrinkles – photorejuvenation with IPL & lasers; microdermabrasion & topical antioxidant/sunblock; RF operation; Fractional resurfacing, etc.



Reduction of Pigmentation

- Combination of laser, IPL & topical whitening products (tyrosinase inhibiting agents), topical antioxidants (e.g. Vitamin A, C, E, etc.) with/without chemical peeling (AHA, BHA, TCAA)



Reduction of vascular lesions

- Combination of laser & IPL operations
- Multiple sessions often necessary for best results
- Oral Vitamin C



Complications of light treatment

- Overdosage or incorrect use may lead to burns with/without permanent scarring or pigmentary changes
- Paradoxical darkening of certain skin lesions (e.g. melasma) may occur
- Damage to eyes with insufficient eye protection



Maintenance treatment after light therapy

- Adequate sunblock
- Topical antioxidant
- Topical pigment stabilizers (tyrosinase inhibitors)
- Topical DNA protectors, e.g. ferulic acid
- Adequate skin moisturisation
- Repeat light treatment at intervals but not continuously