Practical tips in Cosmetic Dermatology for the General Dermatologist

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Cosmetic Dermatology

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Wisconsin Dermatology Society 2012

Disclosure Statement

I, Dee Anna Glaser, MD, do have a relevant financial interest or other relationship with a commercial entity producing health-care related product and or services:

<table>
<thead>
<tr>
<th>Affiliation/Financial Interest</th>
<th>Name of Corporate Organization(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grant/Research Support</td>
<td>Allergan, Suneva – all monies to University</td>
</tr>
<tr>
<td>Consultant</td>
<td>Allergan, Medicis, Merz, Unilever</td>
</tr>
<tr>
<td>Major Stock Shareholder</td>
<td>Allergan</td>
</tr>
<tr>
<td>Other Financial or Material Support</td>
<td>Allergan and Medicis provide cosmetic products (in-kind grant for resident education), Board member of International Hyperhidrosis Society, Off-label uses of therapies</td>
</tr>
</tbody>
</table>

**Presentation has been reviewed by CME Committee Representatives for bias.

Key To Success: Consultation

- Patient “chief complaint”
- History
- Physical exam
- Assessment
- Formulate plan
- Review procedure, outcomes, risks, costs

Key To Success: Consultation

- Patient desires
  - Top 3
  - Use a mirror
- Patient needs
  - Use a mirror
  - Color & texture
  - Lines
  - Volume
  - Cosmetic Units

Cosmetic Consultation

- Budget
- Downtime
- Work schedule
- Social schedule
- Immediate vs gradual change

Consultation

- Current skin care regimen
  - Likes and dislikes
  - Duration of use
  - Sunscreen use
- Past regimens
  - Reason for changing
Cosmetic Consultation

- Past procedures
  - "Where was that performed?"
  - "How did that go?"
  - "How is that working for you?"
- Weight stable or labile
- Considering surgical options?
- Future cosmetic plans
- Why now?

I point out what I think is needed

- Write it down
- Staff involvement
- Offer other experts

Aging Face

- Epidermal & dermal aging
- Skin-muscle interactions
- Skeletal aging
- Fat and volume changes

Botulinum Toxins

<table>
<thead>
<tr>
<th></th>
<th>Botox</th>
<th>Dysport</th>
<th>Myobloc</th>
<th>Xeomin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>1989</td>
<td>1991</td>
<td>2000</td>
<td>2005</td>
</tr>
<tr>
<td>Serotype</td>
<td>A</td>
<td>A</td>
<td>B</td>
<td>A</td>
</tr>
<tr>
<td>Complex weight (kD)</td>
<td>500</td>
<td>&gt;500</td>
<td>700</td>
<td>150</td>
</tr>
<tr>
<td>Excipients</td>
<td>Sodium Chloride, Albumin</td>
<td>Lactose, albumin</td>
<td>NaCl, sodium succinate, albumin</td>
<td>Sucrose, albumin</td>
</tr>
<tr>
<td>Final Formulation</td>
<td>Vacuum dried pH~7</td>
<td>Freeze dried pH~7</td>
<td>Solution, pH 5.6</td>
<td>Freeze dried pH ~7</td>
</tr>
</tbody>
</table>
**Dilution & Storage**

- Carefully inject saline
- Swirl, don’t shake-Ona, Abo
- Turn upside down-inco
- Foaming & bubbles

<table>
<thead>
<tr>
<th>Diluent</th>
<th>Botox/Xeomin (100u/vial)</th>
<th>Dysport (300u/vial)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.9% Saline</td>
<td>Units per 0.1 ml</td>
<td>Units per 0.1 ml</td>
</tr>
<tr>
<td>1.0 ml</td>
<td>10 U</td>
<td>50 U</td>
</tr>
<tr>
<td>2.0 ml</td>
<td>5 U</td>
<td>15 U</td>
</tr>
<tr>
<td>2.5 ml</td>
<td>4 U</td>
<td>10 U</td>
</tr>
<tr>
<td>3.0 ml</td>
<td>3.3 U</td>
<td>10 U</td>
</tr>
<tr>
<td>4.0 ml</td>
<td>2.5 U</td>
<td>7.5 U</td>
</tr>
</tbody>
</table>

- FDA approved storage time
- 4 hours Abo
- 24 hours ona, inco
- 2-8 C
- Current clinical practice is storage 1 week or more
Target Muscles

- Frontalis
- Procerus
- Orbicularis oculi
- Corrugators

Frown Lines - Injection Sites

- Typical sites
- Optional sites (if patient has movement & lines there)

AVERAGE DOSES

20-30 UNITS ona
50-80 Units abo

Cosmetic Indications - Glabellar Frown Lines

Male 42 years old

Before

After

BTX Glabella

Injection

Place thumb under corrugator injection sites using gentle pressure to prevent diffusion to medial orbicularis oculi
Glabellar Frown Lines

Before

After

Crow's Feet

- Average doses
  - 9-15 ona
  - 20-30 abo
  - Inject superficial

Crows Feet

Botulinum Toxin

- Glabella
- Crow's feet
- Brow Elevation
- Lower lid

Forehead

Insertion: skin of eyebrows and root of nose
Forehead

Careful evaluation required
- Males have more muscle mass than many females
- Look for pre-existing brow ptosis
- Look for any brow asymmetry
- Leave some facial expression

AVERAGE
DOSES
6-15 Units ona
15-40 Units abo
Be conservative

Complications
- Lid Ptosis
  - Usually resolves in 1-6 weeks
  - Iopidine (Alcon) eyedrops 1 drop q.i.d. will temporarily resolve
- Brow Ptosis
  - Wait for natural resolution
  - Consider infrabrow injection at arch laterally to raise brow
- Bruising
- Asymmetry

Fillers
- Collagen
  - Zyderm, Zyplast
  - Cosmaderm, cosmoplast
  - Evolence
- HA
  - Hylaform, Hylaform plus
  - Captique
  - Restylane, Perlane
  - Juvederm Ultra, Juvederm Ultra Plus
  - Belotero
- HA + anesthetic
  - Prevelle
  - Elevecos/Hybrile
  - Restylane-L, Perlane-L
  - Juvederm Ultra/Ultra Plus XC
- Calcium Hydroxylapatite
  - Radiesse
  - Radiesse add your own lidocaine
- Poly-L-Lactic Acid
  - Sculptra
- Polyactic Acid
- PMMA
- Artefill
- Fat
- Silicone

HAs
- HA is a linear polysaccharide
- Same chemical structure in all species & tissue
- Sources for HA fillers are similar (bacteria-based)
- HA is altered and stabilized (through cross-linking) into a form that can be injected into skin and survive rapid degradation
<table>
<thead>
<tr>
<th>Source</th>
<th>Juvederm® Ultra</th>
<th>Juvederm® Ultra Plus</th>
<th>Restylane®</th>
<th>Perlane®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total HA concentration</td>
<td>24 mg/mL</td>
<td>24 mg/mL</td>
<td>20 mg/mL</td>
<td>20 mg/mL</td>
</tr>
<tr>
<td>Percent uncrosslinked HA*</td>
<td>~10%</td>
<td>~10%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Degree of crosslinking</td>
<td>~6%</td>
<td>~8%</td>
<td>0.5-1%</td>
<td>0.5-1%</td>
</tr>
<tr>
<td>Formulation</td>
<td>Smooth-Cohesive Gel</td>
<td>Smooth-Cohesive Gel</td>
<td>Gel-Particle Susp</td>
<td>Gel-Particle Susp</td>
</tr>
<tr>
<td>Gel hardness (G' @ 1.6 Hz)</td>
<td>~170 Pa</td>
<td>~200 Pa</td>
<td>500-600 Pa</td>
<td>800-600 Pa</td>
</tr>
<tr>
<td>Needle</td>
<td>30-G</td>
<td>27-G</td>
<td>30-G</td>
<td>27-G</td>
</tr>
<tr>
<td>Duration of effect (FDA label)</td>
<td>&gt;12 mo</td>
<td>&gt;12 mo</td>
<td>&gt;6 mo</td>
<td>&gt;6 mo</td>
</tr>
</tbody>
</table>

**HA Distribution in the Dermis**

<table>
<thead>
<tr>
<th>Belotero® Basic*</th>
<th>Juvederm®</th>
<th>Restylane®</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day 7</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
<tr>
<td>Day 114</td>
<td>![Image]</td>
<td>![Image]</td>
</tr>
</tbody>
</table>

*homogeneous gel, 22.5 mg/mL HA manufactured by Anteis S.A.

**Which HA Is Better?**

- Each product is unique
- Different Characteristics
- Desired outcome (more lift, less spreading, etc.)
- Understanding patient’s needs
- Understanding patient preferences
- Physician preference
- All in the technique

**Techniques for HA Injection**

- Linear threading
- Serial puncture
- Fanning
- Cross-hatching
- Fern


**Filler Location**

How To Get Started

- Short-acting product
- Forgiving product
- NLF
- Forgiving patient

Lines vs Volume

- 0.6 cc calcium hydroxyapatite

Lips

- Is there a best filler?
- Is there a “wrong” filler?
- Technique
  - Shape
  - Volume
  - Proportion

Lips

- Shape
- Volume
- Proportion
Tear Trough

11-9-09

Tear Troughs: Filler Injections

It is important for the injector to properly massage filler after injection.

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Complications: Bruising

~0.3-0.5 cc
Long duration

Tear Trough

6-30-09

Glaser

Complications: Tyndall Effect

2/12/2010
6/18/2010

Glaser
Complications

HA: Complications

- Infections
  - 1-2 weeks
  - Cx usually negative
  - Streptococcus oralis/minihilis, S Epi, mycobacterium
  - Bs: numerous enlarged macrophages and foreign body giant cells with PMNs +/- bacteria
  - May disappear spontaneously
  - Treatment Cipro 500-750 mg 2-14 days

Delayed immune-mediated adverse effects related to HA and acrylic hydrogel dermal fillers JEADV, 2008,22:150-161

Complications: Lumps

How to Maximize Satisfaction

Engage the Patient

Half-way point

Optimizing Patient Satisfaction

- Consult
  - Understanding patient desires & needs
  - Thorough counseling of patient
- Excellent technique
  - Don’t choose the “wrong” filler
  - Be knowledgeable about the filler you choose
  - Choose appropriate injection technique
- Don’t overfill or overtreat