Dermatopathology Case Challenge: Recognizing Mimics and Masqueraders

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DISCLOSURE OF RELATIONSHIPS WITH INDUSTRY

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F0131 Dermatopathology Case Challenge

DISCLOSURES

• None relevant to this talk
• Others:
  ❖ Royalties Lippincott Williams Wilkins
    ▪ Lever’s Histopathology of the Skin
Case 1

• A 74 year old healthy woman presents with rash on face
• Perioral papules, non-pruritic
• No response to 2.5% hydrocortisone and 0.1% triamcinolone
Biopsy of chin
What is the next step?

A. T cell markers
B. B cell markers
C. Stains for EBV and HSV
D. GMS and Fite
E. Sign out as perioral dermatitis
What is the next step?

A. T cell markers
B. B cell markers
C. Stains for EBV and HSV
D. GMS and Fite
E. Sign out as perioral dermatitis
Pathology

- Granulomatous dermatitis
  - No definitive follicular rupture noted
  - Polarization negative for refractile material
  - PAS and Fite stains negative for organisms
What is the next step?

A. T cell markers
B. B cell markers
C. Stains for EBV and HSV: NEGATIVE
D. GMS and Fite
E. Sign out as perioral dermatitis
History

• The rash developed in the areas of cosmetic treatment for facial rejuvenation
• Started 2 days after her most recent microneedling treatment
• Treated in past without any adverse reactions
Diagnosis

- Granulomatous dermatitis from microneedling
Case Report/Case Series

Facial Allergic Granulomatous Reaction and Systemic Hypersensitivity Associated With Microneedle Therapy for Skin Rejuvenation

Razieh Soltani-Arabshahi, MD; Jillian W. Wong, MS; Keith L. Duffy, MD; Douglas L. Powell, MD

JAMADermatol. 2014;150(1):68-72
Patch testing with a standard tray, cosmetic tray, and Vita C Serum showed a +1 positive reaction consisting of grouped erythematous edematous papules after 96 hours.
Hi, Rosalie

Join us for a hands-on experience with MicroNeedling at one of our physician-led workshops in a city near you!

We will be in Atlanta in January 2019 then in Phoenix, NYC and Miami in the next three months, with new cities being announced!

>> Click to visit our workshop landing page <<

During your one-day hands-on workshop, you will:
Microneedling

- aka collagen induction therapy
- Uses: acne scarring, photoaging and rejuvenation
- Also: alopecia, hyperpigmentation, actinic keratosis, verruca

- Repetitive puncturing of skin with sterilized microneedles
- Theory:
  - Trauma incites growth factors that stimulate production of collagen and elastin
Microneedling

Figure 1  Rolling device.

Microneedling
Microneedling

• Advantages: less training necessary to use (astheticians more readily able to do it), less cost, less down time

• Topicals are frequently applied prior to the procedure, ranging from antioxidants to pro-collagen producing factors
Our patient

Using Growth Factors Like Never Before
TNS Recovery Complex® incorporates the highest concentration of a patented growth factor blend-93.6% Tissue Nutrient Solution (TNS®) with over 380 growth factors and cytokines identified. TNS® is the main ingredient in the potent TNS Recovery Complex® skin treatment which is formulated from naturally occurring growth factors, antioxidants, soluble collagen, cytokines and matrix proteins.

What’s Inside
Human Fibroblast Conditioned Media (TNS®)
A physiologically balanced, naturally secreted and stabilized growth factor blend that helps improve the appearance of fine lines, wrinkles, skin tone and texture.

Ingredients
Human Fibroblast Conditioned Media, Isoceteth-20, Ethoxydiglycol, Acrylates/C10-30 Alkyl Acrylate Crosspolymer, Aminomethyl Propanol, Disodium EDTA, Ethylhexylglycerin, Glycerin, Caprylyl Glycol, Caprylyhydroxamic Acid, Phenoxyethanol, Parfum/Fragrance, Hydroxycitronellal, Linalool, Coumarin, Alpha-Isomethyl Ionone, Geraniol, Isoeugenol
Ethylhexylglycerin is a recently introduced synthetic emollient and antimicrobial, derived from plants/grains. It is used in cosmetics and personal care products as an alternative preservative, replacing parabens. Allergy rates are still low, but its use is increasing. The North American Contact Dermatitis Group added it to their tray for testing in 2014. Ethylhexylglycerin 5.0% pet is available from Chemotechnique.
Follow up for our patient

• The patient was patch tested to the cosmeceutical product without any reaction at 2, 3, and 5 days post-application

• Intralesional triamcinolone was administered with some improvement
A Cutaneous Reaction to Microneedling for Postacne Scarring Caused by Nickel Hypersensitivity

Savita Yadav, MD; and Sunil Dogra, MD, DNB
Treatment

- Doxycycline
- Minocycline
Take home

- Microneedling may cause facial granulomatous reaction mimicking perioral dermatitis
Case 2

- 73 year old woman
- Swelling of lower lip
- 4 years
Past Medical History

- Healthy
- No history of inflammatory bowel disease
Punch biopsy submitted

• “r/o Melkersson-Rosenthal syndrome”
  ❖ Granulomatous cheilitis + facial palsy + fissured tongue
  ❖ Absence of Crohn’s disease
Site: Lower lip
What is your diagnosis?

A. Lipophagic panniculitis
B. Cutaneous liposarcoma
C. Pleomorphic lipoma
D. Mycobacterial infection
E. Silicone granuloma
What is your diagnosis?

A. Lipophagic panniculitis
B. Cutaneous liposarcoma
C. Pleomorphic lipoma
D. Mycobacterial infection
E. Silicone granuloma
Contact the dermatologist

• **Me**: Has the patient had any silicone injections?

• **Derm**: “No, she denies any injections or treatments to her lips”
More stains

- Fite
- AFB
- GMS
- S100
- All negative
Contact the dermatologist

• **Me**: Please, ask the patient again if they had any injections

• **CALL THE PATIENT**

• **Derm**: “The only injection she ever had was botox”
  “Nothing in her lips”
Contact the dermatologist

- **Me**: Please get the name of the doctor so that we can get details about the injection.

- **CALL THE PATIENT AGAIN**

- **Derm**: “No doctor. She got her “Botox” on the sides of her nose at a “Botox party” 6 years ago.”
Diagnosis

- Silicone granuloma
- Silicone migration
Why Botox parties can be dangerous

By Haley Hernandez - Health Reporter

Posted: 6:26 AM, November 09, 2018
Updated: 6:26 AM, November 09, 2018

https://www.click2houston.com/health/why-botox-parties-can-be-dangerous
FAKE BOTOX, REAL THREAT

A booming market for a counterfeit beauty product could put a deadly biological weapons agent in the wrong hands

By Ken Coleman and Raymond A. Zilinskas

Key Concepts ■ Consumer demand for counterfeit products containing botulinum neurotoxin may be fueling a proliferation of illicit toxin producers.

Scientific American June 2010, p84
Our case

• Likely silicone used with or without botulinum toxin
Spectrum of Chronic Complications Related to Silicone Leakage and Migration

Alexander J. Ryu, MD, a Katrina N. Glazebrook, MD, b Naziya Samreen, MD, b Philippe R. Bauer, MD, PhD, c Eunhee S. Yi, MD, d Jay H. Ryu, MD c

a Mayo Clinic School of Graduate Medical Education, Rochester, Minn; b Department of Radiology; c Division of Pulmonary and Critical Care Medicine; d Division of Anatomic Pathology, Mayo Clinic, Rochester, Minn.

The American Journal of Medicine (2018) 131, 1383–1386

Report

DOI: 10.7759/cureus.3294

Filler Migration and Granuloma Formation After Gluteal Augmentation with Free-silicone Injections

Alexander Leyva 1, Tri Tran 2, Andrew T. Cibulas 3, David Warden 3, Franklin J. Danger 3, Kurt Scherer 4, Christopher Wasyliw 4
Vulvar Asymmetry Due to Silicone Migration and Granulomatous Immune Response Following Injection for Buttock Augmentation

4 years after injection

Silicone

- Group of synthetic polymeric organosilicon compounds
- Solid, liquid, gel forms
- Uses
  - Cosmetic enhancement
  - Prostheses
  - Implants
  - Coating of needles and syringes
  - IV tubing
Liquid Injectable Silicone

- Polydimethyl siloxane
- Soft tissue augmentation
- Non-carcinogenic
- Minimally-antigenic
- Easily sterilized
- Viscosity constant at various temperatures in human body
Liquid Injectable Silicone

• Pharmaceutical grade/microdroplet technique
  ❖ Minimal migration
  ❖ Granuloma formation

• Large volumes/unknown purity
  ❖ Prone to migration
  ❖ Edema, cellulitis, pneumonitis
  ❖ Granuloma formation
Silicone Granulomas

- Migrate along tissue planes
- Form nodules with redness and swelling
- Seen in lymphatics
- Occur years after injection
  - Up to 28 years later
- May mimic systemic disease
  - Fever, weight loss
Silicone Granulomas: Treatment

- Intralesional steroids
- Systemic steroids
- Oral antibiotics
- Surgical excision
- Immunotherapy:
  - tacrolimus, etanercept, and imiquimod
Take home message

• Persistence about the clinical history helps complete the clinical-pathology correlation

• Migrating silicone mimics granulomatous cheilitis

• Botox party not really Botox