A Multifactorial Case-Based Approach to Medical Dermatology

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Objectives

- Comprehensive approach to Medical Dermatology
- Review Osteopathic Tenets and Philosophy
- Review Case-Based approach to Medical Dermatology
- Review current medical treatments
- Review multifactorial modalities to treatment
### Osteopathic Approach in Dermatology
- **Osteopathic Manipulative Treatment**
  - Patients with skin conditions may benefit from osteopathic manipulative treatment as adjunctive therapy
- **Principle 1. The body is a unit.**
  - Skin disease may affect the mind
  - The mind may cause or exacerbate cutaneous disease
- **Principle 2. The body is capable of self-regulation, self-healing, and health maintenance.**
  - Some skin diseases have an immunologic basis for pathogenesis
  - Self-limited skin diseases illustrate the body’s ability to heal
  - Skin disease can be actively prevented
- **Principle 3. Structure and function are interrelated.**
  - Defects in skin structure result in skin disease
- **Principle 4. Rational treatment is based on an understanding of the 3 main principles.**
  - Examining the patient as a whole
  - Cutaneous signs of internal disease

### Dermatologic Disease
- **Stasis dermatitis, primary hyperhidrosis, brachioradialis pruritus, nostalgia paresthetica**
- **Acne vulgaris, psoriasis, vitiligo, melasma**
- **Delusions of parasitosis, trichotillomania, dysesthesia syndromes, pruritis**
- **Psoriasis, atopic dermatitis, vitiligo, alopecia areata**
- **Pityriasis rosea, granuloma annulare, erythema toxicum neonatorum, lichen striatus**
- **Nonmelanoma skin cancer, melanoma**
- **Bullous impetigo, bullous pemphigoid, pemphigus vulgaris, epidermolysis bullosa variants**
- **Acne vulgaris, psoriasis, occupational dermatoses, dermatomyositis**
- **Acanthosis nigricans, recurrent dermatophyte infections, eruptive xanthomas, pruritus**
Cases

- Burning mouth syndrome
- Herpes Zoster
- Post herpetic neuralgia
- Notalgia Paresthetica
- Brachioradialis pruritis
- Vulvodynia
- Lipodermatosclerosis
- Elephantiasis Nostra Verrucosa
- Stasis Dermatitis
- Hyperhidrosis
Burning mouth syndrome

- Chronic pain syndrome characterized by burning or stinging feeling affecting the oral mucosa in the absence of clinically detectable signs.
- Triad: chronic, unremitting pain, dysgeusia and xerostomia.
- Current treatments include antidepressants, antipsychotics, antiepileptics and analgesics.
- Trigeminal nerve dysfunction or hypo-functioning of the PNS may be possible areas of treatment.
Current Medical Treatment

- Tricyclic antidepressants
- Benzodiazepines
- Anticonvulsants
- Capsaicin
Pemphigus Vulgaris
Pemphigus Vulgaris
Mucocele
Mucocele
Cheilitis
Cheilitis
Cheilitis
Black Hairy Tongue
Black Hairy Tongue
Black Hairy Tongue
OMT

- Sphenopalatine ganglion release – using Myofascial release
Herpes Zoster Infection

- Viral infection due to Varicella Zoster Virus (HHV3)
- Airborne droplets are the usual route of transmission. The incubation ranges from 11-20 days
- The virus replicates in the affected dorsal root ganglion and produces painful ganglionitis. Neuronal inflammation and necrosis can result in a severe neuralgia that intensifies as the virus spreads down the sensory nerve.
- Typically resolves without sequelae; however, the most common complication is post-herpetic neuralgia that persist after the skin lesions have healed.
VZV clinical findings
Herpes Zoster

HSV, and VZV similar pathology
Herpes Zoster

Vesicular

Ballooning degeneration

Acantholysis

Slate grey nuclei

Homogenous/Eosinophilic cytoplasm
Herpes Zoster

3 Ms
Molding
Multinucleation
Margination
Intranuclear inclusion bodies
Clinical findings related to dermatome involved

Hutchinson’s sign

Ramsay Hunt Syndrome

Cervical spine

Thoracic spine

Lumbar spine
Herpes Zoster Folliculitis

Superficial and deep infiltrate

Bottom heavy

Necrotic follicle
Herpes Zoster
Folliculitis

Necrotic follicle
Herpes Zoster
Folliculitis

Outer root sheath ballooning degeneration
Current pharmacologic therapy

- Antiviral agents
  - Acyclovir, valacyclovir, Famcyclovir
- Oral corticosteroids
- Anti-inflammatory agents
  - Oral and topical options
- Opioids
- Botulism Toxin injections
- Complementary treatment including honey, capsaicin, and lidocaine
- Anti-depressants
  - Tricyclic, anticonvulsants,
Alternative treatment options


Intravenous administration of vitamin C in the treatment of herpetic neuralgia: two case reports.
Schencking M, Sandholzer H, Frese T.


Acupuncture in acute herpes zoster pain therapy (ACUZoster) - design and protocol of a randomised controlled trial.
In vitro antiviral activity of honey against varicella zoster virus (VZV): A translational medicine study for potential remedy for shingles.

Shahzad A, Cohrs RJ.

Rains C¹, Bryson HM.

Review of lidocaine patch 5% studies in the treatment of postherpetic neuralgia.

Davies PS¹, Galer BS.
OMT in VZV

- Can be use as adjuvant therapy after acute phase to help prevent post herpetic neuralgia
  - Suboccipital decompression to normalize the PNS
  - Muscle energy to upper thoracic and cervical regions
  - Rib raising to normalize the sympathetic nerves
Brachioradial Pruritus

- Neurogenic pruritic condition between the wrist and elbows
- Unknown etiology
- Unilateral or bilateral excoriations
- Common in fair skinned, affluent, and middle-aged people in sunny climates
- Scratching makes the symptoms worse
- Exacerbated by sun exposure
- Ice packs usually help with the itch
Brachioradial Pruritus
Brachioradial pruritus treatment

- Cervical nerve block
- Acupuncture
- Injections with botulinum toxin A
- Topical mixture of amitriptyline hydrochloride 1.0%, ketamine hydrochloride 0.5% and vanicream applied 2-3 times per day
- Aprepitant, a neurokinin-1 inhibitor
Topical amitriptyline-ketamine for the treatment of brachioradial pruritus.

Poterucha TJ, Murphy SL, Davis MD, Sandroni P, Rho RH, Warndahl RA, Weiss WT.

Brachioradial pruritus: response to treatment with gabapentin

S.M. Winhoven, I.H. Coulson, W.W. Bottomley
Patients have altered sensation in the distribution of the posterior cutaneous nerve of the arm that supplies the skin over the brachioradialis muscle.

Corresponds to C5-C8.

Presence of a cervical rib or cervical nerve root impingement may contribute to altered cutaneous sensation.

Treatment of cervical arthritis and cervical spine manipulation provides relief.
OMM techniques

Muscle energy
Counterstrain

- Tender point arises when abnormal muscle tone is maintained through an inappropriate strain reflex.
- Passively placing the patient into a position of ease, allows for resetting of the neural components involved in the strain reflex.
- Normal resting tone is achieved, resulting in balance in the muscular system, skeletal system, neural and vascular systems.
Counterstrain points
Notalgia Paresthetica

- Uncommon pruritic condition seen most commonly in middle aged women
- Unknown etiology
- Affecting mainly the interscapular region (especially the T2-T6 dermatomes)
- OMT may decrease the sensation of neuropathic pain/itch
Notalgia Paresthetica
Complementary Treatments

The Cutting Edge
August 2007

Successful Treatment of Notalgia Paresthetica With Botulinum Toxin Type A

Pamela Kirschner Weinfeld, MD


Successful treatment of notalgia paresthetica with topical capsaicin: vehicle-controlled, double-blind, crossover study.

Wallengren J¹, Klinker M.
OMM techniques

Treatments include:

- Muscle energy
- HVLA
- Chapman’s points
- Counterstrain
Macular Amyloid
Chapman’s Points
Vulvodynia

- Burning vulvar discomfort, with increased pelvic floor muscle tonicity
  - Irritation, itching, pain, rawness, allodynia, hyperalgesia and dyspareunuria
- Possible due to nerve compression and/or myofascial hypertonicity
  - DNA polymorphisms, peripheral and central neuropathic processes, nerve compression, increased density of C-afferent nociceptive fibers in the vestibular mucosa as possible pathogenesis.
Treatment options

- Topical medications such as lidocaine ointment
- Drug therapy: pain relievers, antidepressants, or anticonvulsants
- Biofeedback therapy
- Physical therapy to strengthen the pelvic floor musculature
- Injections of steroids or anesthetics
- Surgery to remove the affected skin and tissue in localized areas
- Relaxation techniques, massage therapy, homeopathy, acupuncture.
Syphilis
Syphilis
Syphilis
Syphilis
Syphilis
Condyoma
Accuminata
Condyoma Accuminata
Condyoma Accuminata
Verruciform Xanthoma
Verruciform Xanthoma
Verruкоform
Xanthoma
Bowenoid Papulosis
Bowenoid Papulosis
Bowenoid Papulosis
OMT

- Trigger points of the levator ani muscles
- Pelvic diaphragm release
- Counterstrain
Stasis Dermatitis

- Common condition seen in older patients with cardiac insufficiency and venous incompetence
- Due to gravity and increased hydrostatic pressure leading to leaky vessels
- Hemosiderin deposits in the skin of lower extremities causing hyperpigmentation
- Lymphatic pump/effleurage may decrease edema and thus improve condition and decrease the incidence of venous stasis ulcers
Stasis Dermatitis
Stasis Dermatitis
Stasis Dermatitis
Stasis Dermatitis
Osteopathic manipulation in
Elephantiasis Nostras Verrucosa

- Marked edema of affected extremity secondary to severe lymphadema or venous insufficiency
- Results in cutaneous changes: hyperkeratotic verrucous plaques
- Treatment is challenging
- Patients benefit from lymphatic pumping and effleurage
Osteopathic manipulation in Elephantiasis Nostras Verrucosa
Medical management

- Support stockings (knee high, 20-30 mmHg pressure)
- Leg elevation
- Topical steroids
- Compresses if weeping
- Unna boot
- Surgery
Erythema Nodosum
Erythema Nodosum
Erythema Nodosum
Erythema Nodosum
Lipodermatosclerosis

- Also known as sclerosing panniculitis
- Acute phase – painful, symmetric, red to purple, poorly demarcated, indurated plaques in a stocking like distribution.
- Exact pathogenesis remains unknown, possible static blood in lobular capillaries ultimately leading to pannicular ischemia, fat necrosis and fibrosis.
- Tx similar to stasis dermatitis, can add manual stretching to help the fibrosis
DDX

- Morphea profunda
- Scleroderma
- Acrodermatitis chronica atrophicans
Medical Management

- Compression therapy
- Stanozolol
- Pentoxifylline
- Superficial venous surgery
- Antibiotics
- ILK
- Foam sclerotherapy
- Danazol
LDS
Complementary therapies


Refractory lipodermatosclerosis treated with intralesional platelet-rich plasma.

Jeong KH, Shin MK, Kim NI.
OMT

Pedal lymphatic pump using dorsiflexion, with contraction of the posterior compartment of the lower extremity.
Hyperhidrosis
Hyperhidrosis

- Affects 0.6 to 1% of western population
- Excessive function of the sweat control system typically affecting palms, axilla and soles
- Primary
- Secondary
  - Cancer, endocrine dysfunction, infections and medications
- OMM Findings:
  - T2-T3 dysfunction
Pathogenesis
Current treatment options

- Topical aluminum chloride hexahydrate
- Topical anticholinergics
- Oral anticholinergics
- Iontophoresis
- Botulinum A neurotoxin
- Liposuction and surgical excision (axilla)
- Sympathectomy
OMT

- Rib raising
- Occipital release
- Cranial manipulation
Rib raising technique
Conclusions

- Multifactorial approach to medical dermatology
- Think “outside the box”
- Osteopathic manipulation has definite benefits to our dermatology patients
References:

14. Weinfeld PK. Successful treatment of Notalgia Paresthetica with botulinum toxin type A. The Cutting Edge. 2007; August