Greatest Cases from OHSU
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Case #1

• 34 y/o otherwise healthy male
• 6-month history of sporadic blisters on hands and arms
• Denies worsening with sun exposure, residual scarring, or hair growth
• On questioning, also notes 8-month history of loose stools compared to his baseline
• Lives with girlfriend, she has no symptoms

Initial Exam and Plan

• Exam = normal
• Serum IgA = normal
• Tissue transglutaminase = normal
• Return to clinic for biopsy if blisters return
3 Months Pass....

- Awoke with two pruritic vesicles, presents for biopsy
Biopsy Results

• H&E: Massive papillary edema with nodular/diffuse dermatitis with eosinophils and neutrophils. Consistent with *bullaous arthropod bite reaction*.

• Direct Immunofluorescence: no diagnostic immunopathologic changes

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20 Hours After Biopsies

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Linear Red Streak in Setting of Recent Biopsy

• Pruritic, not painful
• No fever/sweats/chills
• No drainage or tenderness
• No lymphadenopathy
• Plan: antihistamines, bacterial culture, and cover for possible infection with antibiotics
• Close follow-up
Superficial Lymphangitis After Arthropod Bite

- Often mistaken for bacterial lymphangitis and treated with antibiotics
- Rare reaction
- Review article in 2008 with a case series of 6 patients + literature review:
  - No fever or lymphadenopathy
  - Pruritic eruption, not painful
  - Spreads over 12-20 hours, disappears spontaneously in a few days
  - No lab abnormalities (CRP, ESR, WBC)

Case #2

- 57 yo Caucasian woman with h/o ESLD due to autoimmune hepatitis underwent orthotopic liver transplant 15 days after acute hepatic decompensation
- Grafted liver responded well with decreasing LFTs and total bilirubin
- She was placed on an immunosuppressive regimen and antimicrobial prophylaxis per transplant protocol
Case #2

- Course complicated by Aspergillus pneumonia treated with Voriconazole and tracheostomy for recurrent respiratory failure
- 3 weeks post-op, had acute rise in LFTs
  - Liver biopsy – non-specific reactive changes
  - ERCP – biliary stricture, stent placed
- Developed diffuse rash on trunk and extremities so Dermatology was consulted on POD 35

Clinical Photos

Differential Dx

- Drug hypersensitivity reaction
  - Elevated eosinophils, LFTs at time of onset
    - Voriconazole (already d/c)
- Scabies
  - Finger papules, volar wrist linear excoriations
    - Scabies prep negative
- Infection
  - Immunosuppressed, h/o aspergillus
    - Tissue culture negative
Histology

3 days later…

Differential Dx

- Graft Versus Host Disease
  - Biopsy showed vacuolar dermatitis
  - Stool studies negative for infectious diarrhea
- Stevens Johnson Syndrome
  - Bactrim d/c, posaconazole unlikely
- Herpes Simplex Virus
  - On prophylaxis, PCR negative
GVHD in liver transplant

- Mortality rate is very high (85-100%)
- Increased risk of GVHD in transplant pts with h/o autoimmune hepatitis
- Donor cells attack host so there is no liver involvement, no abnormal LFTs
- Frequently develop pancytopenia

Diagnosis

- Transplant op note confirmed she received liver from a male donor
- FISH analysis on skin biopsy can tell if the lymphocytes in the skin are donor XY cells
- Found to have 8% XY cells confirming diagnosis of GVHD
- Underwent colonic mucosal biopsy consistent with GVHD
Management

• Decrease immunosuppression to allow host to destroy donor cells
  – Started on 4-week course of Etanercept
  – Continued on Solumedrol and Tacrolimus
• Monitor CBC for pancytopenia
  – Developed severe pancytopenia and started on Neupogen
  – Bone marrow biopsy for HLA typing in anticipation of bone marrow transplant

Follow-Up

• Over the next 24 hours, developed septic shock due to pneumonia, bacteremia, anuric renal failure, myocardial ischemia
• Made comfort care on POD 76 and passed away shortly thereafter

References

Case #3

• 49 yo F with >1 yr swelling, pain, pruritus B LEs
  – Developed red painful bumps
    • Started with trauma to R leg
  – Resolved with prednisone, then relapsed
    • On pred x 6 months
  – Intolerant to MTX
  – Started on colchicine, unclear efficacy after 1 mo tx

Case Presentation

• PMH: Rosacea
• FH: father – RA
• Meds: colchicine, tylenol, ibuprofen, minocycline
• ROS: weight gain, fevers, loss of appetite

Physical Exam
Labs

- ESR: 48
- Eosinophilia
- Fungal testing (aspergillus, blastomyces, cocci, histo) negative
- Hep B/C (-)
- UA normal
- ANA (+), pANCA (+), dsDNA (+)
- C3, C4 normal
- CXR wnl

Pathology
Key historical findings

- On minocycline > 1 year for rosacea
- MCN stopped while on moxifloxacin (sx improved)
- Working Dx: MINOCYCLINE-INDUCED CUTANEOUS POLYARTERITIS NODOSA

Polyarteritis Nodosa

- Segmental necrotizing vasculitis of medium arteries
  - Deposits of C3, IgM, fibrin in walls of vessels
- Pathogenesis
  - Infectious: HBV, HCV, strep, parvovirus B19, HIV
  - Neoplastic: hairy cell leukemia
  - Inflammatory: IBD, SLE, FMF
  - Drug: minocycline
- Classic vs cutaneous (10%) variants
ACR Diagnostic Criteria for systemic PAN

- Livedo racemosa
- Polymorphonuclear arteritis
- Leg pain/myopathy/weakness
- Mono-/polyneuropathy
- Positive HBV serology
- Weight loss > 4kg
- Testicular pain/tenderness
- Diastolic blood pressure > 90 mmHg
- Elevated BUN/creatinine
- Arteriographic abnormality (microaneurysms)

(-) ANCA

Cutaneous variant

- Cutaneous polyarteritis nodosa
  - Necrotizing vasculitis of the medium vessels
  - ANCA negative
  - Cutaneous PAN: 10-20% + pANCA
  - Differentiated from PAN by lack of systemic symptoms
  - Very rare (<3% of all vasculitis)

Cutaneous variant

- F > M
  - 20s to 40s
- Lower extremities
  - Tender nodules
  - Livedo reticulans/racemosa
  - Ulcers
  - Acral gangrene
  - Neuropathy 22-86%
- Associated fatigue and myalgia


MCN-induced PAN

• 27 reported cases
• Common presenting symptoms:
  – Fatigue, myalgias, arthralgias, weight loss, testicular pain, peripheral neuropathy
• One case of 26 yo presenting with ischemic pontine stroke
  – She had livedoid, erythematous patches x 6 months prior

Proposed criteria for dx

• 6 of the following 7
  – MCN use > 12 months
  – Skin manifestations: livedo reticularis, subcutaneous nodules
  – Arthritis or myalgias or neuropathy in distribution of rash
  – Lack of systemic organ involvement*
  – Skin biopsy with necrotizing vasculitis of small to medium-sized vessels
  – + pANCA
  – Improvement after discontinuation of MCN


Case follow up

• Prednisone taper
• Stopped minocycline

• On follow-up, her skin findings had resolved
References


Case #4

- 4 yo M born at term from uncomplicated pregnancy to nonconsanguineous parents with unremarkable family history
- Presents with developmental delay (language, social, cognitive), multiple skin lesions
- At birth he was noted to have right sided 'red flat rash' that looked like he was stung by a jellyfish
- Over time evolved to hypopigmented streaks now becoming thickened with numerous papules
- Coarse hair growth on right arm and leg
- Right thumb is broad, misshapen

Physical Exam

- Hypopigmented, slightly atrophic smooth papules and plaques studded with ice pick-like scarring and open comedones in Blaschko-linear distribution involving majority of R side of body
- Hyperpigmented atrophic papules and plaques on R foot
Physical Exam

- Hypertrichosis on R anteromedial thigh and R upper arm (not shown)
- Broad (double in width) irregularly shaped R thumb with deep fissure
- Outside imaging:
  - R hand X-ray: duplicated metacarpal, duplicated proximal and distal phalanx
  - Brain MRI: Cystic abnormality involving R ventricle

Histology

- Strands of basaloid cells in fibrotic stroma surrounding partially dilated follicular infundibulum consistent with basaloid follicular hamartoma
- 5X
- 10X

Happle-Tinschert Syndrome (aka Basaloid follicular hamartoma syndrome)

- Approximately 12 cases reported
  - Often under different designation but with same clinical features
- Unilateral, Blaschko-linear basaloid follicular hamartomas
  - Cutaneous lesions can be associated with milia or comedonal-like umbilication
  - Lesions can become more papular and hyperpigmented over time, specifically around puberty
- Ipsilateral extracutaneous defects include:
  - Skeletal: polydactyly, over or deficient growth of ipsilateral limbs, cervical ribs
  - Dental: anodontia, hypodontia
  - CNS: Developmental delay, meningioma, optic glioma, arachnoid cysts, ventricular cysts
- Mosaic, genetic defect not yet identified, 3:1 M:F
  - Previously hypothesized to be related to Gorlin syndrome (aka nevoid basal cell carcinoma syndrome) but all cases tested for PTCH gene mutation have been negative
References


Case #5

• 8 day old female
• Born at 29 weeks gestation
  – Caucasian mother and father
• Pregnancy complicated by fetal anemia necessitating two intrauterine transfusions
  – 26 & 27wks

• Total bilirubin elevated at 12 hrs after birth
  – intensive phototherapy was initiated
• Ruddy after birth
• Increasing brown grey skin discoloration over following 48hrs
• Consult placed for changing skin color
• Family History
  – 4 yo sister born at 32 weeks
  – h/o fetal hydrops, hydrocephalus, hearing loss, cardiac
    malformation, transfusion dependent anemia
  – s/p BMT no longer needing transfusions
  – had similar discoloration after birth
  – also underwent phototherapy as neonate
  – discoloration resolved several weeks after birth
Patient’s sister at birth and at a few weeks of life

Differential

• Bronze baby syndrome
• Chediak-Higashi syndrome
• Unusual jaundice
• Carbon baby syndrome
  – universal acquired hypermelanosis
• Chloramphenicol intoxication
  – gray baby syndrome

Diagnosis

The “bronze” baby syndrome: A complication

Hyperbilirubinemia
  – First degree

Fig. 13. The sera and urine of the infants. From left to right, patient’s urine, control urine, patient’s serum, and control serum.
Discussion

• Pathogenesis unclear
• Accumulation of bilirubin photoproduct
• Cholestasis results in decreased elimination of pigment
• But, not all babies with cholestasis develop BBS during phototherapy


Management

• No intervention for pigment necessary
  – Pigmentation slowly returns to normal with discontinuation of phototherapy (5-20 days)
  – Phototherapy normally continued as needed for hyperbilirubinemia
• Babies that develop BBS should be investigated for possible underlying liver disease
  – Caution in monitoring O2 saturation as pigment has been reported to interfere with pulse oximetry reading
  – If pigment does not resolve with discontinuation of phototherapy investigate alternative diagnosis

SA Hussain. J Perinatology 1999
Clinical Course

- Total Bilirubin decreased with phototherapy so phototherapy was stopped
- Color faded rapidly after discontinuation of phototherapy

4 days after stopping phototherapy

2 weeks after stopping phototherapy

SPTA1 Mutation
Bronze Baby Syndrome (BBS):
- Rare condition characterized by development of a dark gray-brown discoloration of the skin, serum, and urine with phototherapy
- Requires hyperbilirubinema, cholestasis, and phototherapy
- Exact pigment unknown, thought to be photo product of bilirubin
- Pigmentation resolves with cessation of phototherapy

References

- McDonagh AF. Bilirubin, Copper-Porphyrins, and the Bronze-Baby Syndrome. J Pediatr 2011;158:168-4

Thank you!