Intercity Infectious Diseases Rounds

New York University School of Medicine
Bellevue Hospital
Veterans Affairs New York Harbor HealthCare System
Tisch Hospital

May, 9, 2016

NYU Intercity Infectious Disease Rounds: References
May 9, 2016

Case #1

- Diagnosis, Treatment, and Long-Term Management of Kawasaki Disease. AHA, 2004
- Kawasaki Disease. Principles and Practice in Pediatric Infectious Disease, Fourth edition, 2012.
- Bitter, J. J., S. A. Ming, A. and O. Wargon (2008). "Annular lesions in Kawasaki disease: a cause of confusion." Australas J Dermatol 49(4): 207-212.
- Friedman, R. L. Paltzik and H. C. Mofenson (1979). "Kawasaki's disease appearing as erythema multiforme." Arch Dermatol 115(1): 71-72.
- Eun, L. Y., J. W. Go, W. H. Kang, S. H. Kim and H. K. Cho (2010). "Erythema multiforme associated with Kawasaki Disease in a Korean child." Eur J Dermatol 20(4): 524-525.
- Vierucci, F., C. Tuoni, F. Moscuzza, G. Saggese and R. Consolini (2013). "Erythema multiforme as first sign of incomplete Kawasaki disease." Ital J Pediatr 39:
- Nozaki, T. and Y. Morita (2016). "Cervical US and CT findings of Kawasaki disease: comparison with lymphadenitis.

Case #2

- Eastwood JB, Carbishley CM, Grange JM. Tuberculosis and the Kidney. J Am Soc Nephrol. 2001.12: 1307-1314.
- Kulchavenya E. Best practice in the diagnosis and management of urogenital tuberculosis. Ther Adv Urol. 2013. 5(3): 143-151.
- Wong N, et a. Genitourinary tuberculosis masquerading as a ureteral calculus. Can Urol Assoc J. 2013; 7(5-6): 363-6.
- Chen H, Liu Y, Wu. Diffuse Calcification of the Urinary System and Miliary Tuberculosis Due to Delayed Diagnosis of Genitourinary Tuberculosis: A Case Report. Iran J Public Health, Vol 44, No 2, Feb 2015, 276-278.
- Anel-Quimpo J, Sandoval MAS, Lantion-Ang FL. Hypercalcemia from genitourinary tuberculosis in a female with multiple exostoses. BMJ Case Reports 2011.
- Merchant S, Bharati A, Merchant N. Tuberculosis of the genitourinary system- Urinary tract tuberculosis: Renal tuberculosis- Part I. Indian Journal of Radiology and Imaging. Feb 2013; 23(1): 46-63.

Case # 3

- Albis C, Vargas R, Concha A, Atenea Costa, V. Esophageal Gastroduodenal Cryptococcosis: A Case Report 2014 Asociaciones colombianas de gastreoenterologia endoscopia digestive coloprotologia y hepatologia
- Trevenzoli M, Lanzafame M, Lazzarini L, Carretta G, Vento S, Concia E. Esophageal cryptococcosis in a patient with AIDS. Am J Gastroenterol. 1999 Jul; 94(7): 1981-2.
- Bhaijee F, Subramony C, Tang SJ, Pepper DJ. Human immunodeficiency virus-associated gastrointestinal disease: common endoscopic biopsy diagnoses. Patholog Res Int. 2011 Apr 26.
- Washington K, Gottfried MR, Wilson ML. Gastrointestinal cryptococcosis. Mod Pathol. 1991 Nov; 4(6): 707-11

Case # 4

- Zabaleta J, et al. Acute mediastinitis as a complication of H1N1 influenza. Arch Bronconeumol. 2010 Jul; 46(7):398.
- Brook I, Frazier EH. Microbiology of mediastinitis. Arch Intern Med. 1996; 156: 333–336.
- Cross MR, et al. Esophageal Perforation and Acute Bacterial Mediastinitis: Other Causes of Chest Pain That Can Be Easily Missed. Medicine (Baltimore). 2015 Aug; 94(32): e1232.
- Norder Grusell E, Dahlén G, Ruth M, et al. Bacterial flora of the human oral cavity, and the upper and lower esophagus. Dis Esophagus. 2013; 26:84–90.

Case # 5

- Zhu YC, et al. Rapid prediction of inducible clarithromycin resistance in Mycobacterium abscessus. Molecular and Cellular Probes. 2015; 29: 514-516.
- Hanson KE, et al. Rapid molecular detection of inducible macrolide resistance in Mycobacterium chelonae and M. abscessus strains: a replacement for 14-day susceptibility testing? J Clin Microbiol. 2014; 52(5): 1705-7.
- Panagea T, et al. Mycobacterium abscessus Complex Identification with Matrix-Assisted Laser Desorption Ionization-Time of Flight Mass Spectrometry. J Clin Microbiol. 2015; 53(7): 2355-2358.

Case # 6

1. Bryant E, Davis CL, Kucenic MJ. Lymphocutaneous Nocardiosis: A case report and review of the literature. *CME*. Feb 2010
2. Brown-Elliott BA, Brown JM, Conville PS, Wallace RJ, Jr. Clinical and laboratory features of the *Nocardia* spp. based on current molecular taxonomy. Clin Microbiol Rev. 2006;19:259-282
3. Ambrosioni J, Lew D, Garbino J Nocardiosis: updated clinical review and experience at a tertiary center. *Infection* 2010; 38:89–97
4. Maraki S, Scoulica E, Alpantaki K, et al. Lymphoctaneous nocardiosis due to Nocrdia brasiliensis. *Diagnostic Microbiol Infect Dis*. 2003; 47:341-344
5. Cercenado E, Marin N, Sanchez-Martinez M, Cuevas O, Martinez-Alarcon J, Bousa E. In vitro activities of tigecycline and eight other antimicrobial agents against *Nocardia* species identified by molecular methods. Antimicrob Agents Chemother 2007;51:1102-1104
6. Wendy W. J. van de SandeGlobal Burden of Human Mycetoma: A Systematic Review and Meta-analysis. PLOS Neglected tropical diseases. 2013 DOI: 10.1371/journal.pntd.0002550
7. Ricci JA, Weil AA, Eberlin KR. Necrotizing Cutaneous Nocardiosis of the Hand: A Case Report and Review of the literature. J Hand Microsurg. 2015 Jun;7(1):224-7.

CASE #1: Dr. Sanchez

Presentation: A 9 y/o female, previously well, admitted for fever and rash.4 days PTA, mother noted rash, macular, on the cheek without any other associated symptoms. 2 days PTA, patient had fever (Tmax: 104) associated with sore throat, odynophagia and small, tender left cervical lymphadenopathy (< 1 cm). She was brought to PMD who did a rapid strep, which was negative. Throat culture was sent and she was empirically started on Cefadroxil. At home, she continued to be febrile and mother noted spread of the rash to the face, trunk, and extremities. The next day, she was still febrile associated with worsening of the rash and 4 episodes of non-bilious, non-bloody vomiting so she was brought to the ER.

PMH: none
Allergies: Omnicef (hives)
FH: rheumatologic disease (SLE) in 2 maternal aunts, cousin with Addison's disease
SH: lives with parents and 7 siblings in Brooklyn; in the Catskills 10 days ago; no sick contacts

Physical Exam:
Awake, uncomfortable, not in respiratory distress
NCAT, bilateral eyelid edema/erythema, pink conjunctiva with clear-yellow discharge, dry red cracked lips, diffuse facial swelling, (-) oral ulcerations, ears with desquamation and redness; 4 cm, tender cervical LAD
Good air entry, bilateral, (-) rales/wheezing
Normal S1, S2, tachycardic, (-) murmur
Soft, flat abdomen, (-) masses/tenderness
Labial erythema; Full and equal pulses, (-) edema/cyanosis, (-) joint pain/swelling
Diffuse, discrete papular/plaque lesions 0.5-2 cm in diameter, even on palms and soles, some coalescing on forehead/arms > legs

Initial labs and imaging
11.8>40<223 N88 L6 M5 Bs1
CRP 157 ESR 24 Procalcitonin 18.85
ASO: 800
AST 27, ALT 29, AP 116, TP 5.3, Alb 2.6
U/A: normal
CXR: mild bronchial wall thickening
Neck US: Left cervical lymphadenitis, with associated cellulitis and myositis of the sternocleidomastoid muscle

A Procedure was performed!

CASE #2: Dr. Slawek

Presentation: persistent dysuria x1 year
39 yo M initially sent to urology for hematuria, found to have significant stone burden on imaging. Cystoscopy performed with no abnormalities found. Was scheduled for ureteroscopy and lithotripsy, but patient was lost to follow up x1 year. Returned to urology one year later, for further workup and treatment.

PMH: none
SH: Works as an Uber driver. Lives with his wife in Brooklyn. No alcohol, smoking, or history of IV drug use.

Physical Exam: VS: 98.7, P 77, R 14, BP 135/70
Gen: alert & oriented x3, NAD, Abd: s/nt/nd, Back: no CVA tenderness bilaterally, GU: circumcised phallus, patent meatus, testes descended bilaterally

Initial Labs: CBC: 7.4>14.7/45.2<338 Neutrophils 58.9%
BMP: 139/4.8 | 101/28 | 24/1.2<75
UA: glu neg, bili neg, ketones neg, spec grav 1.026, blood moderate (2+), pH 6.5, protein 100 (2+), nitrite neg, leukest large (3+), WBC 50-100, RBC 5-10, Epithelial cells 1-10, Bacteria few, Crystals calcium oxalate (1-5)
Urine cytology: negative for malignant cells. Few RBCs. Crystals present. Abundant inflammation.
Urine culture: no growth

CT abd/pel w/o: markedly dilated L anterior lower pole calyx containing multiple heavily calcified stones, with associated severe thinning of the overlying cortex and circumferential thickening of the adjacent infundibulum, presumably related to sequela of chronic calyceal obstruction from the patient's stone disease. L proximal ureteral calculus, and punctate stone or stone fragments in the distal ureter with associated mild upstream dilation of the L ureter and of the remaining L- sided calyces. Extensive, smooth, circumferential thickening of nearly the entire left ureter and of the L renal pelvis in addition to the lower pole infundibulum described above, related to sequelae of chronic stone disease.

Cystoscopy and retrograde pyelogram: to the R and L of the bladder dome, approximately 2-3 cm patches of weepy erythrmatous mucosa that was consistent with inflammation and cystitis. Significant alternating, narrowing and dilatation of the ureter. Moderate hydronephrosis. Beaded appearance of the ureter with alternating narrowing and dilation

Pathology and culture sent!

Case #3: Dr. Bontempo

Presentation: DOE for 1 week
45 y/o man with HIV, CD4 290 (21%), VL undetectable, presented with 1 month of DOE, intermittent dry cough, and with R chest pain. Denies fever, chills, night sweats, weight loss. Seen by PCP as outpatient after 10 days of symptoms. Azithromycin was prescribed and CXR ordered that showed some abnormalities non the right hilum and right middle lobe.

PMH: HIV infection: diagnosis 1992. 2 PCP in distant past. CD4 nadir 7. Started HAART in 2013. Intermittent adherence in the past. Now taking ARV consistently on TDF/FTC/ETG/Cobi
Bacterial PNA in 2014, h/o Bell's palsy zoster, syphilis

Allergies: anaphylaxis to Bactrim
Meds: TDF/FTC/ETG/Cobi
SH: Born in Puerto Rico. Lived in NY for many years. Denies any drug use/ EtOH/ tobacco
FH: Father died from esophageal cancer.

Physical Examination: VSS, afebrile, NAD, no respiratory distress, No skin findings, No lymphadenopathy, RRR s1 s2 ok no m/g/r, Abdomen is soft NT ND BS+, AOX3, CNS WNL

Initial Labs: WBC 5.4, Hb 12.4, CMP wnl (Alk Phos 144), VL undetectable, CD4 count 290 (21%)

CT Chest: Consolidation on right middle lobe. Soft tissue density right laterally adjacent to the esophagus measuring 2 x 2.9 cm, extending to the right superior mediastinal region. Suspect mild extension of the mass into the right posterior wall of the trachea. Right hilum lymph node measuring 1.2 cm x 1.8 cm. Few other sub centimeter mediastinal lymph nodes are noted, nonspecific.
Conclusion: Suspicion of esophageal neoplasm (from esophageal or tracheal origin)

Further imaging study and biopsy was performed!

Case #4: Dr. Parajuli

Presentation: fevers and muscle aches x 6 days
18 y/o woman c/o low-grade fevers and muscle aches x 6 days. Associated symptoms of right chest, neck, and left back pain x 4 days. Also with nausea/vomiting. No travel. Found to be Influenza positive and given Tamiflu by PMD prior to admission.

PMH: GERD, eczema
PSH: EGD showing esophagitis
Allergies: NKDA
Meds: Pantoprazole
SH: lives in Brooklyn, NY. Orthodox Jewish family. No toxic habits.
FH: IBD in extended family

Physical Examination: Febrile (T102.4), HR 109, drowsy, no LAD, L-sided neck pain. Diminished breath sounds bilateral bases, mild RUQ abd tenderness without rebound.

Initial Labs: WBC 13.8 (N88%), CMP wnl, CRP 270, ESR 67, Lactate 1.7, HIV negative

CT Chest: Diffuse confluent mediastinal adenopathy as well as diffuse thickening surrounding the esophagus with infiltration of the surrounding mediastinal fat. Diffuse esophagitis versus marked mediastinitis. Small/moderate R and tiny L pleural effusions w/patchy airspace disease at R lung base (atelectasis vs. PNA).

Diagnostic procedure was performed!

Case #5: Dr. Epstein

Presentation: fevers and cough x 4 days
58 y/o woman with h/o esophageal cancer s/p esophagectomy/XRT 2011 presented complaining of productive cough associated with chest pain and SOB. Symptoms similar to recent pneumonia which was treated with antibiotics but never fully recovered. Reports multiple pneumonias since her surgery.

PMH: esophageal adenocarcinoma s/p esophagectomy/XRT, DVT/PE, GERD, obesity s/p gastric bypass
Allergies: PCN (unknown childhood reaction)
Meds: umeclidinium, fluticasone-salmeterol, tiotropium, quetiapine, duloxetine, gabapentin, pantoprazole, cyclobenzaprine
SH: chronic former smoker, quit 6 yrs ago
FH: mother with liver cancer, father with colon cancer

Physical Examination: Febrile (T102.8), O2 90-96% RA, chronic ill appearing, nontoxic, decreased breath sounds bilateral bases, bibasilar crackles R>L

Labs: WBC 12.5 (N83%), CMP wnl, HIV negative

CT Chest: Findings compatible with worsening multifocal pneumonia, right greater than left. Likely some component of CHF with asymmetric edema, greater on the right. Increased small bibasilar pleural effusions. Prior partial esophagectomy and gastric pull-up. Borderline and mildly enlarged mediastinal nodes, some of which are increased. These may be reactive and should be re-assessed on follow-up.

Diagnostic procedure was performed!

Case #6: Dr. Kupferman

Presentation: left index finger pain and swelling x 3 wks
84 y/o woman with ESRD on HD c/o progressive index finger swelling/pain. Started as a small black lesion with proximal spread. Given antibiotics for cellulitis without improvement. After admission started on empiric antibiotics without improvement.

PMH/PSH: ESRD on HD, COPD, Stage 2 colon cancer s/p hemicolectomy, Prostate cancer s/p TURP
Allergies: NKDA
SH: lives in NYC, h/o extensive travel worldwide in past, gardens for hobby
FH: IBD in extended family

Physical Examination: Vitals normal/stable, well-appearing, NAD, no LAD, 3/6 holosystolic murmur, bibasilar pulmonary crackles, LUE AVF with thrill, left first digit with erythema extending proximally to elbow with lymphagitis.

Diagnostic culture performed!

3. James R. Klinger, Maria Pia Sanchez, Linda A. Curtain, Margaret Durkin, and Bela Matyas. Multiple Cases of Life-threatening Adenovirus Pneumonia in a Mental Health Care Center, American Journal of Respiratory and Critical Care Medicine, Vol. 157, No. 2 (1998), pp. 645-649.
4. Hong-Xia Yu, Mao-Mao Zhao, Zeng-Hui Pu, Yun-Qiang Wang, and Yan Liu. Clinical data analysis of 19 cases of community-acquired adenovirus pneumonia in immunocompetent adults. Int J Clin Exp Med. 2015; 8(10): 19051–19057.
5. Hijikata N, Takayanagi N, Sato S, Harasawa K, Miyaoka K, Asanuma K, Kawabata Y. Adenovirus pneumonia in an immunocompetent adult. J Infect Chemother. 2012 Oct;18(5):780-5.

HSV1 on hand

1. Lawhead FK1, Smith SG, Shimek CM, Skinner R. Herpes simplex virus type 2 of the palm as an AIDS defining complex . Cutis.2012 feb:89(2):78-80 PMID:22474730.
2. 2. Bardell D Hand-to-hand transmission of herpes simplex virus type 1. Microbios. 1989;59(239):93-100. PMID:2554099.
3. Umemoto N, Toda S, Kakurai M, Demitsu T. Recurrent herpes simplex-2 infection on the palm. J Dermatol. 2003 Oct;30(10):764-5 PMID: 14684964.
4. 4. Dilley D1, Chandler RG, Gupta A.Christine M. Kleinert Resistant herpes infection of the palm in a patient with acquired immunodeficiency syndrome: a case report. J Hand Surg Am. 1997 Jul;22(4):650-2.PMID: 9260621.

Atypical mycobacterial infection and abdominal surgery

1. Griffith DE, Aksamit T, Brown-Elliott BA, et al. An official ATS/IDSA statement: diagnosis, treatment and prevention of non-tuberculous mycobacterial diseases. American Thoracic Society Statement. *Am J Resp Crit Care Med.* 175:367-416; 2007
2. Brown-Elliott BA1, Nash KA, Wallace RJ Jr. Antimicrobial susceptibility testing, drug resistance mechanisms, and therapy of infections with nontuberculous mycobacteria.*Clin Microbiol Rev.* 2012 Jul;25(3):545-82.
3. Wright HL, Thomson RM, et al. Rapidly growing mycobacteria associated with laparoscopic gastric banding, Australia 2005-2011. *Emerg Infect Dis.* 2014 Oct;20(10):1612-9.

Pasteurella multocida wound infection

1. Weber DJ, Wolfson JS, et al. Pasteurella multocida infections. Report of 34 cases and review of the literature. *Medicine* 63(3) 133-54 (1984).
2. Hubbert WT, Rosen MN. Pasteurella multocida infections. II. Pasteurella multocida infection in man unrelated to animal bite. *Am J Public Health Nations Health.* 1970 Jun; 60(6): 1109–1117.
3. Cook PP. Persistent postoperative wound infection with Pasteurella multocida: case report and literature review. *Infection.* 1995 Jul-Aug; 23 (4):252.
4. Chun ML, Buekers TE, et al. Postoperative wound infection with Pasteurella multocida from pet cat. *Am J Obstet Gynecol.* 2003 Apr; 188(4): 1115-1116.
5. Fourreau F, Mehchai F., et al. Vascular graft infection due to Pasteurella multocida. *SpringerPlus.* 2015 Dec 30;4:824. doi: 10.1186/s40064-015-1638-7. eCollection 2015.

Intercity Infectious Diseases Rounds
New York Medical College—3/14/16

REFERENCES

Powassan/Deer tick virus

1. Piantadosi A, Rubin DB, McQuillen DP, Hsu L, Lederer PA, Ashbaugh CD, Duffalo C, Duncan R, Thon J, Bhattacharyya S, Basgoz N, Feske SK, Lyons JL. Emerging Cases of Powassan Virus Encephalitis in New England: Clinical Presentation, Imaging and Review of the Literature. Clin Infect Dis 2015 Dec 13. Pii: civ1005 [Epub ahead of print]. PMID 26668338
2. El Khoury MY, Camargo JF, White JL, Backenson BP, Dupuis AP 2nd, Escuyer KL, Kramer L, St George K, Chatterjee D, Prusinski M, Wormser GP, Wong SJ. Potential role of deer tick virus in Powassan encephalitis cases in Lyme disease-endemic areas of New York, USA.Emerg Infect Dis. 2013 Dec; 19(12):1926-33. PMID 24274334
3. El Khoury MY, Hull RC, Bryant PW, Escuyer KL, St George K, Wong SJ, Nagaraja A, Kramer L, Dupuis AP, Purohit T, Shah T, Wormser GP. Diagnosis of acute deer tick virus encephalitisClin Infect Dis. 2013 Feb;56(4):e40-7. PMID 23166187
4. Tavakoli NP, Wang H, Dupuis M, Hull R, Ebel GD, Gilmore EJ, Faust PL. Fatal case of deer tick virus encephalitis. N Engl J Med. 2009 May 14;360(20):2099-107. PMID 19439744
5. Wormser GP, Pritt B. Update and Commentary on Four Emerging tick-Borne Infections: Ehrlichia muris-like Agent, Borrelia miyamotoi, deer tick virus, Heartland virus, and Whether Ticks Play a Role in Transmission of Bartonella henselae. Infect Dis Clin North Am. 2015 Jun;29(2):371-81. PMID:25999230

Borrelia miyamotoi

1. Molloy PJ, Telford SR 3rd, Chowdri HR, Lepore TJ, Gugliotta JL, Weeks KE, Hewins ME, Goethert HK, Berardi VP. Borrelia miyamotoi Disease in the Northeastern United States: A Case Series. Ann Intern Med. 2015 Jul 21;163(2):91-8. PMID 26053877
2. Krause PJ, Fish D, Narasimhan S, Barbour AG. Borrelia miyamotoi infection in nature and in humans. Clin Microbiol Infect. 2015 Jul;21(7):631-9. PMID:25700888
3. Gugliotta JL, Goethert HK, Berardi VP, Telford SR 3rd. Meningoencephalitis from Borrelia miyamotoi in an immunocompromised patient. N Engl J Med. 2013 Jan 17;368(3):240-5. PMID:23323900
4. Platonov AE, Karan LS, Kolyasnikova NM, Makhneva NA, Toporkova MG, Maleev VV, Fish D, Krause PJ. Humans infected with relapsing fever spirochete Borrelia miyamotoi, Russia. Emerg Infect Dis. 2011 Oct;17(10):1816-23. doi: 10.3201/eid1710.101474.PMID:22000350
5. Krause PJ, Narasimhan S, Wormser GP, Rollend L, Fikrig E, Lepore T, Barbour A, Fish D. Human Borrelia miyamotoi infection in the United States. N Engl J Med. 2013 Jan 17;368(3):291-3. PMID:23323920.

Adenovirus

1. Hakim FA, Tleyjeh IM. Severe adenovirus pneumonia in immunocompetent adults: a case report and review of the literature. Eur J Clin Microbiol Infect Dis. 2008;27:153–158. PMID:18030505
2. Jason H. Barker, James P. Luby, A. Sean Dalley, William M. Bartek, Dennis K. Burns, and Dean D. Erdman. Fatal Type 3 Adenoviral Pneumonia in Immunocompetent Adult Identical Twins Clin Infect Dis. (2003) 37 (10): e142-e146 doi:10.1086/379127.

Zh Mikrobiol Epidemiol Immunobiol.
1988 Jun;(6):30-2.
[Laboratory-confirmed case of human infection with ratpox (cowpox)].
[Article in Russian]
Marennnikova SS, Zhukova OA,
Manenkova GM, Ianova NN.
Abstract
The present work describes a case of human disease resulting from the bite of a white rat and caused by a biological variant of cowpox virus. The isolates obtained from the sick man and the white rats which had been the source of this infection proved to be identical and did not differ from the biological variants of cowpox virus, isolated earlier from white rats and carnivorous animals of the family Felidae. Thus, the possibility of ratpox (cowpox) transmission from sick rodents to man was established.
PMID: 3176779 [PubMed - indexed for MEDLINE]