Nocardiosis-a clinicoepidemiological profile over 10 years

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Background: Nocardiosis is a clinical and diagnostic challenge, compounded by lacunae in existing literature. Our objectives were to establish the clinical spectrum of this disease in our setting, describe the most common causative agent of the disease and to ascertain differences in our patient population from available data.

Methods & Materials: This was a 10 year (2004-2013) retrospective study carried out at a tertiary care centre in South India, of 131 cases of nocardiosis. The electronic medical records were studied and data analysed.

Results: Sixty three percent were male, 23% of all in the sixth decade of life. The most common sites of infection were the skin and the eye-36 (27%) patients each and the lower respiratory tract -35 patients(26%). 48 (37%) patients were on immunosuppressant therapy, either a triple drug therapy following renal transplant, autoimmune disorders/ haematological malignancies on combination immunosuppressants or patients on prolonged corticosteroids. Of 36 patients with nocardiosis in the eye, 30 (83%) were corneal ulcers with history of trauma with vegetative matter or soil, and 5(14%) were endophthalmitis following intraocular lens implantation. 16(46%) patients with respiratory tract nocardiosis had a previous lung pathology. 11(8%) were HIV associated nocardiosis. Disseminated disease was seen in 7(5.3%) patients following renal transplant and in 3(2.3%) patients with SLE, all on triple drug immunosuppression. The most common organism isolated was Nocardia asteroides in 73(56%), followed by Nocardia spp in 32(24%), aerobic actinomycetes in 24(18%) and Nocardia brasiliensis in 2(1.5%). All patients responded to treatment with cotrimoxazole alone or in addition to surgical debridement for cutaneous and subcutaneous lesions. There was only one Nocardiosis related death in this cohort of patients. Antimicrobial susceptibility testing performed on 72 isolates showed 6.9%, 9.7%, 31%, 38%, 75%, 42%, 31%, 74% susceptibility to penicillin, ampicillin, erythromycin, tetracycline, cotrimoxazole, chloramphenicol, cefazolin and triple sulfa respectively.

Conclusion: We report a predominance of nocardiosis from the eye and nocardiosis following immunosuppression. The most common species isolated was N. asteroides. A paucity in HIV associated nocardiosis is striking. Antimicrobial susceptibility showed 75% susceptibility to cotrimoxazole, the drug of choice, which was reflected by a good response to therapy in this cohort.

http://dx.doi.org/10.1016/j.ijid.2016.02.350

Cholera outbreak investigation, Gajala community, Birnin Kudu Local Government Area (LGA), Jigawa State, Nigeria, September 2015

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Background: Outbreaks of cholera are common in Nigeria, at week 40 this year, it has occurred in 18 states (95 LGAs). Overall, 4542 cases has been recorded, case fatality rate (CFR) 3.87%. An outbreak of cholera was reported in Gajala community, Birnin Kudu Local Government Area, Jigawa State, Nigeria on September 16th, 2015. We carried out an investigation to confirm, characterize, assess the magnitude of the outbreak and identify possible risk factors.

Methods & Materials: We carried out descriptive characterization of the outbreak, active case search and an un-matched (1:2) case control study. A case was defined as “Any person ≥2 years living in Gajala community, presenting with acute watery diarrhea, with or without vomiting from September 11th to 25th 2015”, and a control defined as above but without acute watery diarrhea or vomiting. Median age of the 138 respondents was 20years (range: 2-7). Frequencies, univariate, bivariate and multivariate analysis was done using Epi info version 3.5.3. Stool samples from case patients was tested with rapid diagnostic test (RDT) kit (smart kit) and water samples cultured in the laboratory. Finally, we assessed the sanitary and waste disposal system.

Results: We recorded 50 cases, median age 21years (range: 2-80), more male were affected, 27(54%), attack rate (AR) 10.5%, one death occurred, CFR 2%. Mean duration of illness before seeking healthcare was 172hours (SD: 15.2). Stool samples tested positive to Vibrio cholerae RDT, water samples yielded negative result. The significant risk factors were not washing hand before eating, (age adjusted odds ratio (AAOR): 2.78 (1.16-6.63), not washing hand after toilet, (AAOR): 2.63 (1.18-5.85), and poor knowledge of cholera (AAOR: 2.52 (1.23-5.28). Good sewage system (pit toilet covered) and proper waste disposal system was observed.

Conclusion: Cholera outbreak in Gajala 11th-25th September 2015, was caused by Vibrio cholerae of serotype 01, and characterized by severe illness, high AR and CFR. Poor knowledge of
Clostridium difficile infection at outpatient clinic without known risk factors - CDI can be antibiotic-unassociated diarrhea in outpatient setting

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Background: Clostridium difficile is a common cause of antibiotic associated diarrhea. Besides use of antibiotics, there are a number of risk factors associated with Clostridium difficile infection (CDI). Nosocomial exposure during hospitalization is one of such risk factors. However, it has been reported that community-onset, healthcare facility–associated disease (CO-HCFA) and community-associated CDI (CA-CDI) are reasing in Europe and North America. However, the incidence and characteristics of CO-HCFA and CA-CDI in Asian countries are not well known.

Methods & Materials: We performed a retrospective chart review on community onset or associated CDI at a Japanese primary care clinic from January 2014 to September 2015. Cases with positive stool CD toxin test with clinical diagnosis made by Board certified gastroenterologists were defined as CDI, CO-HCFA, CA-CDI and severity of disease were defined as according to the SHEA –IDSA guideline. History of recent antibiotic exposure within 1 year was also evaluated. Age, sex, statin and gastric acid suppression drug use (i.e. proton pump inhibitor or H2 blocker), and Charlson Comorbidity Index (CCI) Score were also assessed. Patient's occupational exposure to healthcare setting were also assessed.

Results: Four cases of CDI were diagnosed during study period. Every patients presented with chief complaints of diarrhea and fever. All of them were CA-CDI, and nobody had exposure to healthcare. Patients' ages range from 15 to 47 with one being woman. One case had the history of previous antibiotic use within one year. All the cases were mild to moderate disease. All the patients' CCI score were 0 and nobody used gastric acid suppression drugs.

Conclusion: None had known other risk factors associated with CDI, which suggests CDI should be within differential diagnosis of community onset diarrhea in Japan. Since all our cases are mild to moderate, there might have been undiagnosed CDI which resolve spontaneously. Further studies may be necessary to evaluate true incidence and clinical significance of CA-CDI in our settings.