Extended Abstract

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Changing trends in gonococcal infections-shift to MSM: Emerging resistances

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Introduction: Gonococcal infections are a major part of sexually transmitted infections among MSM. The rising trend of gonococcal infections in male is alarming and screening of antibiotic resistance is important to treat them. The objective is to isolate gonococci and detect the resistance of gonococci by phenotypic methods from patients attending venereology department.

Gonococcal infections are a major part of sexually transmitted infections among MSM. The rising trend of gonococcal infections in male is alarming and screening of antibiotic resistance is important to treat them. The objective is to isolate gonococci and detect the resistance of gonococci by phenotypic methods from patients attending venereology department.

Method: All the patients with cervical discharge or urethral discharge attending venereology department were screened by grams stain and culture was done on Thayir Martin medium. Antibiotic resistance was detected by disc diffusion method as per CLSI guidelines.

Results: A total of 50 gonococcal isolate were identified from males with urethral discharge. None were isolated from females. Out of 50 isolates 60% (30) were B-lactamase producers and resistance to penicillin and 34% (17) to tetracycline. 64% (32) of isolates had developed chromosomal resistance to Ciprofloxacin and 12% (6) were resistance to Azithromycin. 4% (2) of the isolate was resistant to Cephalosporins. One isolate was resistant to four drugs.

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Conclusion: The isolation of gonococci from male has been increasing along with resistance to penicillins, fluoroquinolone and tetracycline. Resistances to Cephalosporins are beginning to appear. Emergence of multidrug resistance makes treatment of gonococcal infections a challenge. Hence it is mandatory to screen for resistance and treat the infections so as to prevent spread of infections especially in male with multiple sex partners all of whose identity may not be known to treat the partner as well.

Background gonococcus has progressively developed resistance to sulfonamides, penicillin, tetracycline and fluoroquinolones, and gonococcal susceptibility to cephalosporins has been declining worldwide. Methods We described trends in gonococcal antimicrobial susceptibility within the USA from January 2006 through June 2012. Susceptibility data for cefixime, ceftriaxone, azithromycin, penicillin, tetracycline and ciprofloxacin were obtained from the Gonococcal Isolate Surveillance Project (GISP), a sentinel closed-circuit television that monitors antimicrobial susceptibility in urethral gonococcal isolates collected from symptomatic men at 25–30 sexually transmitted disease clinics throughout the USA. Results the share of isolates with elevated cefixime minimum inhibitory concentrations (MICs) (≥0.25 mg/mL) increased from 0.1% in 2006 to 1.4% in 2010–2011 and was 1.1% within the first 6 months of 2012. the share with elevated ceftriaxone MICs (≥0.125 mg/mL) increased from 0.1% in 2006 to 0.3%–0.4% during 2009 through the primary 6 months of 2012. there have been no temporal trends within the prevalence of elevated azithromycin MICs (≥2 mg/mL) (0.2%– 0.5%). The prevalence of resistance remained high for penicillin (11.2%–13.2%), tetracycline (16.7%–22.8%) and ciprofloxacin (9.6%–14.8%). Conclusions The proportion of gonococcal isolates with elevated cephalosporin MICs increased from 2006 to 2010, but plateaued during 2011 and therefore the first 6 months of 2012. Resistance to previously recommended antimicrobials has persisted. because the number of antimicrobials available for gonorrhoea treatment dwindles, surveillance systems like GISP are going to be critical to detect emerging resistance trends and guide treatment decisions. BACKGROUND Gonorrhoea is that the second most ordinarily reported notifiable communicable disease within the USA, following chlamydia.1 In 2011, there have been 321 849 cases of gonorrhoea reported to the Centers for Disease Control and Prevention (CDC), yielding a rate of 104.2 cases per 100 000 population.2 While this case rate represents a 78% decline since reaching a peak of 464.1 cases per 100 000 in 1975, the US gonorrhoea rate has been trending upwards within the previous couple of years.2 additionally , CDC estimates that fewer than half all cases are detected and reported, which over 800 000 cases occur within the USA annually .3 Historically, gonorrhoea treatment and control has been complicated by the relative ease with which gonococcus develops antimicrobial resistance. Since the introduction of antimicrobials to treat gonorrhoea, N gonorrhoeae has progressively developed resistance to sulfonamides within the 1940s,4 penicillin and tetracycline within the 1980s,5 6 and fluoroquinolones within the 2000s.7–9 By 2007, cephalosporins (injectable ceftriaxone or oral cefixime) were the sole remaining class of medicine recommended by CDC as first line treatment for gonorrhoea.9 However, gonococcal susceptibility to cephalosporins, particularly cefixime, has been declining worldwide also as within the USA.10 11 In 2012, CDC revised its treatment guidelines in order that the

sole recommended first line regimen for gonorrhoea within the USA is dual therapy with ceftriaxone and either azithromycin or doxycycline.12 The emergence and spread of cephalosporin resistance in N gonorrhoeae could severely impair gonorrhoea treatment and control efforts. to organize for and respond effectively to the present threat, robust surveillance of gonococcal susceptibility is critical. METHODS

Results: A total of 50 gonococcal isolate were identified from males with urethral discharge. None were isolated from females to penicillin and 34% (17) to tetracycline. 64% (32) of isolates had developed chromosomal resistance to Ciprofloxacin and 12% (6) were resistance to Azithromycin. 4% (2) of the isolate was resistant to Cephalosporins. One isolate was resistant to four drugs.

Biography

Kavitha M has completed her MD Microbiology at the age of 34 years from Stanley Medical College 14 years of teaching experience.Area of interest immunology, Infection Control, Sexually Transmitted infection, and medical education. Has worked in Regional reference Lab for STI for 2 years, State reference Lab for HIV for 5 years and State reference Lab fro Dengue and Chickungunya for 3 years.I am undergoing Advanced Course In Medical Education At Regional Center Sri Ramachandra Medical University. She Has been in Bio-Medical Waste Management Traning And Monitoring for more than10 years. Published 5 Articles and Presented 4 Topic in National Conferences Has been a speaker in National Conference for STI.

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