

Detection of minimum inhibitory concentration of cefuroxime and ceftriaxone for neisseria gonorrhoeae

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To determine the presence and the extent of cefuroxime resistance among / Neisseria gonorrhoeae isolates at the central STD laboratory in Colombo during the period August 2004 - October 2004. The agar dilution method was used to determine the minimum inhibitory concentrations (MICs) to cefuroxime and ceftriaxone. The sensitivities of all strains to the two antibiotics were interpreted according to NCCLS criteria. Isolates from first visits and positive test of cure (TOC) cultures were analysed separately. Out of the 141 isolates, MIC testing for both antibiotics was successful in 108 (77 present) isolates. Out of 58 (41 present) patients who returned for test of cure, 11 (19 present) were confirmed positive. At MIC testing for cefuroxime, MIC range was 0.031 mcg/ml to 1 mcg/ml. MIC50 was 0.25 mcg/ml and MIC90 was 0.5 mcg/ml. For ceftriaxone, MIC range was from 0.001 mcg/ml to 0.063 mcg/ml. MIC50 and MIC90 were 0.008 mcg/ml and 0.016 mcg/ml respectively. In the positive TOC cultures most isolates showed MICs of 0.5 - 1 mcg/ml for cefuroxime, with a different pattern of distribution to that of 108 isolates from first visits. ceftriaxone MICs for TOC positive isolates gave similar distribution pattern to that of 108 isolates from first visits. All isolates tested were sensitive to cefuroxime. Therefore, cefuroxime can be continued as drug of choice for gonorrhoea in Sri Lanka. However continued regular MIC surveillance studies are important. MICs of all isolates for ceftriaxone was very much lower than the cut off level. Therefore ceftriaxone could continue to be used as the alternative or as the first line antibiotic.