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Efficacy of Single-Dose Azithromycin Therapy for the Treatment of Chlamydia trachomatis in Patients Evaluated for Child Sexual Abuse in an Urban Health Center 2006-16

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Abstract : Introduction: According to the American Academy of Pediatrics (AAP) there are different weight-based recommendations for the treatment of Chlamydia trachomatis (CT) in patients who are being evaluated for sexual assault. Current AAP Red Book guidelines recommend that uncomplicated C. trachomatis anogenital infection in prepubertal patients weighing less than =<45 kg be treated with oral erythromycin 50 mg/kg/day QID for 14 days with no alternative therapies, and for patients whose weight => 45 kg are Azithromycin 1 gm PO once. Our study objective was to determine the efficacy of single-dose Azithromycin therapy for the treatment of Chlamydia trachomatis in patients weighing less than 50 kg who were evaluated for child sexual abuse in an urban setting. Methods: We conducted a retrospective chart review of historical medical records (paper and electronic) patients weighing less than 50 kg who were evaluated for child sexual abuse and subsequently treated for C. trachomatis infection with Azithromycin (20 mg/kg PO once up to a maximum 1 gm) and received a Test of Cure (TOC) from 2006-2016. Qualitative variables were expressed as percentages. Quantitative variables were expressed as mean values (+/- standard deviation [SD]) if they followed a normal distribution or as median values (interquartile range[IQR]) if they did not. Wilcoxson two-sample test was used to compare means of Azithromycin Dose, mg/kg, and TOC timing between treatment responders and non-responders. Results: We reviewed records of 34 patients, average age (SD) was 5.4 (2.0) years, 33 (97%) were treated for CT and 1(3%) for both GC and CT. 25 (74%) were females. Urine PCR was the most commonly used test at evaluation and as TOC with 13 (38%) patients completing both tests. The average (SD) dose of Azithromycin at treatment was 470 (136) mg and average (SD) mg/kg dose of 20 (1.9) mg/kg for all patients. Median (IQR) timing for TOC testing was 19 (14-26) days. Of the 33 with complete data 25 (74%) had a negative TOC. When compared with treatment non-responders (TOC failures), treatment responders received higher doses (average dose (SD) received 495 (139) vs 401(110), P 0.06)); similar average (SD) weight base dosing received (20.8(2.0) vs 19.7 (1.5), P 0.15)), and earlier average (SD)TOC test timing (18.8 (5.6) vs 32 (28.6) P 0.02)). Conclusion: Azithromycin dosing appears to be efficacious in the treatment of CT post sexual assault as majority of patients responded. Although treatment responders and non-responders received similar weight based doses, there is need for additional studies to understand variances and predictors of response.

Keywords : child sexual abuse, chlmaydia trachmotis infection, single-dose azithromycin, weight less than or equal to 45 kilograms
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